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UGANDA PROTECTORATE

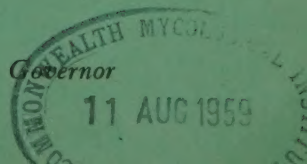
Annual Report
of the
Department of Agriculture

For the Year Ended 31st December, 1957

Price: Shs. 5

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Published by Command of His Excellency the Governor



CONTENTS

	<i>Paragraphs</i>
I. INTRODUCTION	1- 10
II. WEATHER	11- 12
III. FOOD CROPS AND FOOD SUPPLIES	13- 17
IV. ECONOMIC CROPS :	
(a) Cotton	18- 27
(b) Coffee	28- 47
(c) Tobacco	48- 62
(d) Oilseeds	63- 66
(e) Maize	67
(f) Tea	68
(g) Sugar	69
(h) Sisal	70
V. AGRICULTURAL DEVELOPMENT AND EXTENSION WORK:	
(a) Soil Conservation	71- 73
(b) Agricultural Education	74- 80
(c) Animal Husbandry and Pasture Work	81- 83
(d) Irrigation and Swamp Reclamation	84- 87
(e) Resettlement	88- 89
(f) Kigumba Settlement Area	90
(g) Liaison with African Local Governments	91
(h) Mechanical Cultivation	92-102
(i) Ox-drawn Equipment	103-104
(j) Farm Planning	105-106
VI. INVESTIGATIONS :	
(a) Soil and Vegetation Surveys	107-111
(b) Annual and Medium-Term Crops (Botanical Investigations)	112-118
(c) Annual and Medium-Term Crops (Entomological Investigations)	119-129
(d) Perennial Crops (Coffee Research Unit)	130-135
(e) Farming	136-139
VII. STAFF	140-141
VIII. ACKNOWLEDGMENTS	142

IX. APPENDICES:

- I. Uganda Rainfall, 1957.
- II. (a) Cotton Production, 1956/57.
- II. (b) Cotton Production—Monthly Plantings, 1957/58.
- II. (c) Cotton Production—Monthly Plantings as percentage of Total Acreage.
- II. (d) Cotton Production—Annual Bale Production.
- III. (a) Crop Acreages—Uganda.
- III. (b) Crop Acreages—Buganda Province.
- III. (c) Crop Acreages—Eastern Province.
- III. (d) Crop Acreages—Western Province.
- III. (e) Crop Acreages—Northern Province.
- IV. Crop Sales and Values.
- V. (a) Overseas Exports of Agricultural Products.
- V. (b) Exports of Agricultural Products to Kenya and Tanganyika.
- VI. Non-African Crop Production.
- VII. Population and Availability of Land.
- VIII. Principal Agricultural Legislation.
- IX. Staff Postings.

UGANDA PROTECTORATE

DEPARTMENT OF AGRICULTURE

Annual Report
For the year ended 31st December, 1957

I. INTRODUCTION

(a) Policy

1. The policy of the Department has been stated in detail in the report of the Agricultural Productivity Committee which was published in 1954 and accepted by Government. During 1957 no major changes were made in this policy, the main aims of which are:—

(i) to ensure that the cultivators produce sufficient food for themselves, and for the consuming public, of a type and quality to meet their dietetic needs;

(ii) to seek new knowledge by means of co-ordinated research designed to improve land usage and the yields and quality of both crops and livestock;

(iii) to ensure that the land is properly used and the soil adequately conserved;

(iv) to encourage the maximum production of suitable economic crops for export or for local use; while fulfilling policy aims (i) and (iii);

(v) to ensure that the primary marketing of all economic crops and the further marketing of those economic crops which are not handled by statutory boards are carried out as efficiently as possible;

(vi) to introduce improved farming systems which, where suitable, embrace the integration of stock and crops to their mutual advantage;

(vii) to disseminate proven agricultural knowledge by all means available, but particularly through agricultural teaching institutions and the activities of departmental field staff.

(b) General Review

2. In view of the pressing need to raise the annual revenue of the country, an all out drive was launched to increase agricultural production. The predominating effort was directed at cotton and coffee, emphasis being placed on raising yields per acre by better farming rather than upon increasing acreage. Close attention was also paid to the maintenance and improvement of quality in produce sold.

3. The weather during the year was capricious, very favourable early rains being followed by unusually dry conditions in the third quarter which prevented the potential acreage being achieved and lowered the yields of all crops. During the last quarter the position was improved by plentiful rain.

4. There were no serious food shortages, but the poor second rains led to a diminution of reserves, thus the long-term prospects at the close of the year were uncertain in parts of the Eastern and Northern provinces.

5. In the 1956/57 season, yields of cotton were higher than in the previous season, except in the Northern Province, and the total crop exceeded that of 1955/56 by nearly 9,000 bales. In the 1957/58 season the production drive met with encouraging success and a record acreage of early cotton was planted. Dry weather, after planting, dashed early hopes of a record crop. The pedigree seed increase schemes proceeded as planned, but in the B.P.52 areas a complementary scheme, to safeguard against crop failure, was started in Bugerere County of Mengo District. The local B.P.52 variety should be completely replaced in the 1958/59 season. In the important cotton growing areas of Buganda farmers continued to replace cotton by Robusta coffee and food crops, because of the greater profitability. The upward trend of cotton production, outside the coffee growing areas, was shown by the record crops grown in Busoga and Toro zones in 1956/57.

6. Coffee producers had a good year, the production of African-grown coffee, other than Bugisu Arabica, being a record. It is estimated that African coffee growers, outside Bugisu District, received over £9 million from the sale of their coffee during the calendar year, whilst the value to growers of the Bugisu crop was estimated at nearly £1½ million. Non-native coffee production, which was the highest recorded, was valued at over £2½ million. During the year amending legislation was introduced permitting African coffee growers to participate to an increasing degree in processing their crop.

7. Tobacco production rose, the output of flue-cured leaf being a record, while the fire-cured crop was one of the largest ever grown. Owing to the risk of the production of air-cured tobacco exceeding the requirements of the local manufacturers, farmers were encouraged to maintain their acreage at the 1956 level. Sugar and tea production continued to rise and the 1957 crops were the largest ever recorded.

8. Effective chemical control measures against Banana Weevil and Root Mealy Bug, developed by the Research Division of the Department, were applied in the field for the first time. Confirmatory trials were conducted on farmers' plots on the control of Lygus Bug on cotton preparatory to major developments in 1958.

9. At Bukalasa in Buganda, the first main Farm Institute opened its doors in February and 47 students successfully completed their first year's training. Excellent progress was made with building the Arapai Farm Institute in Teso District which will open in February, 1958.

10. Despite pre-occupation with the production drive all departmental field staff continued to devote an important part of their time to soil conservation measures. The response by farmers to the newly formed Farm Planning Service was most encouraging.

II. WEATHER

11. The rainfall pattern was unusual, plentiful and well-distributed early rains being followed by a dry spell which lasted from late June until October in most parts of the Protectorate. In the last quarter of the year rainfall was above average in all districts.

12. In January, the dry season weather was temporarily broken by local storms which were more frequent and heavier than usual. The first three weeks of February were hot and dry, after which the weather became progressively less settled until the break of the early rains in the second half of March. In Buganda Province the rains did not become general until early April, although above average falls were recorded at a number of stations in March. Heavy and well-distributed rain was received in all provinces in April, followed by good falls throughout May. In the Northern Province, however, the first half of the latter month was mainly dry. The customary break in the rains began in the West Nile and Karamoja districts in early June, but elsewhere the dry weather did not set in until the second half of the month. Thereafter, although some fairly heavy falls of rain were recorded in the last weeks of both July and August, the weather generally continued to be exceptionally dry until October. September was a particularly dry month, conditions at times being more characteristic of the dry season. Toro District was more favoured than elsewhere, the rains, although below normal from June to October, being sufficient for planting to proceed normally; similar conditions were experienced during the same period in the main coffee growing areas on Mount Elgon. The dry weather was relieved by rain in early October in Kigezi District and in the rest of the Western Province in the middle of the month, by which time the wet weather had spread to the whole of the Northern Province and Buganda. In the Eastern Province, there was little effective rain until late October. Once the late rains had started, falls were above average and the wet weather continued until mid-December in all parts of the country, whilst in the Eastern Province it remained unsettled until the end of the year.

III. FOOD CROPS AND FOOD SUPPLIES

13. Supplies of food were adequate in all areas and the few shortages which occurred were easily made good by sales of food from more favoured areas and by purchase of maize meal through trade channels.

14. In the Northern and Eastern provinces sowing of finger millet started early, and with the favourable rains large acreages were sown. In Lango District progress was less rapid, owing to spasmodic rain in the latter half of March. In the second quarter, excellent progress was made with

the planting of all food crops throughout the Protectorate, except in West Nile District where the lack of rain in the lowlands hampered the work. In the Eastern Province, a good harvest of finger millet was gathered in favourable weather. In the Northern Province, the crop gave yields about average. The unfavourable weather in the third quarter reduced the yields of many crops and severely hindered planting. In Buganda, lack of rain hastened the ripening of plantains and supplies of "matoke" decreased in September. The good rains in October enabled rapid progress to be made with swamp and valley plantings of sweet potatoes and with upland planting of beans and cassava. The final acreage of food crops was satisfactory, but yield were much less than usual. During November and December plantain gardens recovered from the drought and supplies increased steadily.

15. As the result of trials conducted on the control of Banana Weevil (*Cosmopolites sordidus*) which was referred to in last year's report*, a simple and inexpensive method of control was evolved using 0.50% Dieldrin dust, and a start was made with applying the method in the field. Progress was initially slow as the majority of farmers, although interested in controlling the pest, were anxious to see the results on their neighbours' farms first. As a result of propaganda and demonstrations, interest increased towards the end of the year and supplies of the insecticide became more widely available in shops.

16. In all districts, particularly in the Eastern and Northern provinces, the planting of cassava varieties resistant to mosaic disease was extended.

17. At the end of the year, the overall food position was satisfactory, but in parts of the Eastern and Northern provinces, where lack of rain in the third quarter was most marked, severe local shortages are expected in the second quarter of 1958, before the gathering of the new harvests. It is expected that this shortfall of food will be largely met by the sale of maize meal through the local shops.

IV. ECONOMIC CROPS

(a) Cotton

(i) 1956/57 Season

18. As the crop year is from 1st May to 30th April, this report deals only with the marketing of the 1956/57 crop.

19. During January marketing was hindered by rain which lowered the grade and caused losses in the field where picking was delayed. Except in the Northern Province, yields were higher than in the previous season, the total production being 372,433 bales compared with 363,449 bales in 1955/56. The Busoga crop was 107,840 bales which was a record for the zone. Similarly the production of 8,229 bales was a record for the Toro Zone. The average yield per acre for all cotton growing areas was 313 lb. of seed cotton compared with 305 lb. in the 1955/56 season. The following table gives comparative figures of production over the last twelve seasons:—

*Annual Report 1956, paragraph 161.

Table A.—Cotton Production, 1945/46–1956/57

Season	Estimated acreage	Bales of lint (400 lb.)	Average yield of seed cotton per acre	Average price to growers (100 lb.) (seed cotton)
			<i>lb.</i>	<i>Shs. cts.</i>
1945–46 ..	1,145,568	227,554	265	16 40
1946–47 ..	1,253,257	231,745	247	18 45
1947–48 ..	1,036,829	170,066	218	20 42
1948–49 ..	1,555,371	391,240	333	29 61
1949–50 ..	1,628,473	339,788	282	31 75
1950–51 ..	1,535,200	346,465	301	43 16
1951–52 ..	1,514,157	380,304	332	47 56
1952–53 ..	1,472,553	319,992	290	48 60
1953–54 ..	1,611,223	397,631	325	49 40
1954–55 ..	1,738,821	299,935	227	58 81
1955–56 ..	1,585,500	363,449	305	52 11
1956–57 ..	1,568,539	372,433	313	53 34

20. The prices paid to growers for clean raw cotton were Shs. 56/- and Shs. 55/- per 100 lb. for B.P.52 and S.47 growths, respectively. Stained raw cotton was priced at Shs. 20/- per 100 lb., except in the West Nile Zone where the price was Shs. 23/- per 100 lb. The total value of the crop to growers was £13,081,000 compared with £12,576,000 in 1955/56.

21. One hundred and thirty-five ginneries were working during the season of which ten were operated by African growers' co-operative unions. All lint cotton was purchased from ginners by the Lint Marketing Board at prices based on the prices of raw cotton and buying and ginning costs together with profit allowance. The whole crop was sold on the Kampala auctions, together with the AR cotton seed not required for planting.

(ii) 1957/58 Season

22. Favourable early rains, together with a vigorous production campaign, resulted in a record acreage being planted to the end of June. Prospects of an all-time record production were, however, wrecked by the failure of the rains in the third quarter of the year. The exceptionally dry weather during the main planting and growing period reduced the acreage below the potential and caused a general diminution in the yields of all plantings. The total area planted was 1,617,013 acres compared with 1,568,539 in 1956/57, the increase being in the Northern and Western provinces. Good rains in the last quarter improved the condition of the later sowings in some areas. The incidence of pests and diseases was generally low. All seed for planting was again dusted with fungicide against blackarm disease and this reduced the primary infection substantially. Yields are not expected to be as high as in the 1956/57 season in many zones. Marketing opened earlier than ever before, and at the end of the year the equivalent of 75,000 bales had been bought. The crop

forecast at the close of the year was 320,000 bales. Whilst this is a disappointing figure after the excellent early promise of the crop, it should be remembered that but for the success of the early planting campaign, crop prospects would have been very much worse.

(iii) *Seed Increase Scheme—B.P.52 Strains*

23. To safeguard against crop failure in the Busongora area, a new and complementary increase scheme was started in Bugerere County in Mengo District. After three consecutive multiplications within the county the new seed will spread westwards to merge with the seed coming from the Busongora scheme.

24. The third wave of the new multiline strains of B.P.52 (N.C.56) was bulked at experiment stations and farms in 1956 and 60 tons of seed were produced for planting in 1957. Thirty tons were issued to the north Bugerere area and the balance to east Busongora.

25. The second wave of new seed (N.C.55) was planted in the west Busongora area in 1957, whilst the first wave (N.C.54) was issued to the remainder of the Toro Zone and the whole of the Mubende Zone. It is expected that the production of N.C.54 seed will be sufficient to plant the Masaka and Bunyoro zones and that part of the Mengo Zone not supplied by the Bugerere scheme, in 1958, thus completing the replacement of the old B.P.52 variety by the new multiline strains.

(iv) *Seed Increase Scheme—S.47 Strains*

26. The boundaries of the three areas comprising the South Teso Segregated Zone were adjusted to achieve a better integration of the successive stages of seed multiplication. The sequence of multiplication is that the first area, now referred to as Area I, is planted with pedigree seed from Serere Experiment Station and the seed produced is issued to the second area (Area II) which, in turn, supplies Area III and the Usuku Zone. Cotton grown in the two latter areas provides seed for planting the whole of the North and South Teso zones and the northern part of the Mbale Zone. These zones supply in the following season seed for the remainder of the Mbale Zone, and the whole of the Lango and Acholi zones. The scheme thus requires five seasons from the planting of Area I for each wave of seed.

27. All the Teso zones, with the exception of Usuku, were planted with the new seed in 1957/58, but owing to the accidental destruction by fire of part of the seed while distribution was in progress, it was necessary to supply part of each zone with S.47 seed. The mixed seed will, however, be wholly replaced by the next wave of pedigree seed in the 1958/59 season.

(b) *Coffee*

(i) *Bugisu Arabica—1956/57 Season*

28. The total crop was 5,175 tons of parchment and 190 tons of "buni". All parchment was prepared by growers using hand-operated drum pulpers, and, of the total production, 91% was classified as No. 1

parchment. The collection of the crop from the primary societies was completed in April, and the whole crop was marketed by the Bugisu Co-operative Union. The overall quality was slightly lower than in the previous season. The chief faults were picking over-ripe cherry, insufficient washing prior to fermentation, and incomplete drying. Each society's No. 1 parchment was classified by the Kenya Coffee Marketing Board's liquorer in Nairobi and the average classification was 4.9 compared with 4.7 in 1955/56. The average prices paid per pound to primary societies by the Union were:—

<i>Shs. Cts.</i>			
No. 1 Parchment	...	...	2 51
No. 2 Parchment	...	...	1 84
Buni	...	...	0 68

29. The coffee was milled in Nairobi and the whole crop (apart from six tons of clean coffee sold locally) sold at the Nairobi auctions. The average prices per cwt. realised for clean coffee at the auctions were:—

<i>Shs. Cts.</i>			
No. 1	...	...	493 40
No. 2	...	...	407 22
Buni	...	...	287 17

30. Work on the erection of the coffee curing works at Mbale was well advanced by the end of the year.

(ii) *Bugisu Arabica—1957/58 Season*

31. Rainfall was generally adequate at the middle and higher altitudes, but at the lower altitudes and in Sebei County, the rainfall pattern followed that of the rest of the Province, conditions being particularly dry in September and early October. Flowering began early in January at the lower altitudes, and spread to the higher altitudes in February where it continued throughout March and April. Pruning was done by trained gangs paid by the Co-operative Union. The work was not done as well as in previous years, because of a change in the system of payment, whereby the gangs were paid according to the number of trees pruned, instead of receiving a monthly wage. The Co-operative Union has since agreed that the old system of payment will be re-introduced in 1958. The cost of the work, which was borne by the Union, was £21,368. The production of seedling trees was in the hands of individual societies, funds being supplied by the Co-operative Union. The standard of nursery work and arrangements for distribution made by the societies, left much to be desired. The demand for seedlings remained keen and 2,293,174 were sold. Chemical control measures against *Antestia*, Lace Bug and Root Mealy Bug were continued. The results achieved against *Antestia* were disappointing; test sprays indicating that in many of the areas treated the insect population had remained high. Further control work will be carried out against the pest in early 1958, when special attention will be paid to methods of application of the insecticide. Good results were obtained with the control measures

against Root Mealy Bug, but the insecticide used for the control of local outbreaks of Lace Bug was only partially effective. *Hemileia vastatrix* was exceptionally severe at the lower altitudes from July to October and losses from Berry Borer were greater than usual. The main picking started at the lower altitudes in June, and by the end of the year 3,703 tons of parchment had been collected by the Co-operative Union. At the end of the year, the crop forecast for the season was 6,000 tons of parchment. Details of the last twelve seasons' crop are shown in the following table:—

Table B.—Bugisu Arabica Coffee

Season	Production (Parchment)	Estimated value to growers
	<i>Tons</i>	<i>£</i>
1945-46 ..	2,817	97,169
1946-47 ..	3,058	107,215
1947-48 ..	2,996	121,692
1948-49 ..	2,857	173,799
1949-50 ..	2,852	184,859
1950-51 ..	3,896	442,104
1951-52 ..	2,203	377,575
1952-53 ..	2,307	633,040
1953-54 ..	3,122	1,231,791
1954-55 ..	6,170	2,015,662
1955-56 ..	4,098	1,349,576*
1956-57 ..	5,175	1,420,353

* Includes value of 177 tons "buni".

(iii) *African-grown Coffee other than Bugisu Arabica*

32. During the calendar year the total production of African-grown coffee, other than that produced in Bugisu District, was 61,570 tons of clean coffee, which was mainly Robusta, but included a small amount (486 tons) of Arabica grown in Buganda and the Northern and Western provinces. This was the largest crop ever grown in the Protectorate, the previous record being 60,160 tons in 1955. Prices per pound paid to growers at the curing works were raised on the 5th June and became:—

	<i>Shs.</i>	<i>Cts.</i>
Robusta unhulled (Kiboko)	0	80
Arabica unhulled (Kiboko)	1	05
Robusta rough-hulled containing not more than 2% of husk and/or extraneous matter	1	50 (minimum price)
Arabica rough-hulled containing not more than 2% of husk and/or extraneous matter	2	00 (minimum price)

33. The value of the crop to producers was estimated at £9,138,566. The processing of this coffee was handled by 12 curing works and seven hulleries. Six of the curing works were African-owned enterprises established under the terms of the Coffee Industry Ordinance, 1953, and all worked in 1957. The marketing of clean coffee remained the responsibility of the Coffee Industry Board, and the whole crop was sold on the

Kampala auctions. Prices were fairly steady throughout the year ranging from Shs. 231/50 to Shs. 252/25 per cwt. for Grade 10; Shs. 230/- to Shs. 257/- per cwt. for Grade 15, and Shs. 220/- to Shs. 254/75 per cwt. for Grade 25. The higher prices for Grades 15 and 25 as compared with Grade 10 are attributable to a general rise in the level of prices in world market during the period in which the lower grades were sold.

34. In Buganda, which is by far the largest producing area, there were signs that farmers were taking more interest in the husbandry of their crop. Pruning and desuckering remained backward, but the use of cattle manure and mulching with coffee husks increased. The demand for seedlings greatly exceeded the supply, and over half a million were sold from official nurseries, whilst large numbers were grown privately. New plantings were established in all the main coffee areas in the province. During the second half of the year a special campaign was launched in an attempt to raise the standard of picking and drying. The use of trays for drying was encouraged to the exclusion of all other methods. In most areas there was a good response to the campaign, and in one division 500 trays were sold, during the last quarter of the year.

35. In the Western Province, Toro District is the main coffee growing area, the bulk of the crop coming from Bwamba County. The inspection system started in 1956, whereby all Bwamba coffee is examined prior to export from the district, was effective in maintaining the high standard of this coffee. Recorded sales were 868 tons of rough-hulled Robusta and 49 tons of rough-hulled Arabica, the total production of African-grown coffee in the district being 991 tons of rough-hulled coffee. In Ankole District, as a result of closer supervision of primary marketing, it was possible to obtain more accurate figures of production. Recorded sales during the year were equivalent to 902 tons of rough-hulled Robusta and 216 tons of rough-hulled Arabica. Interest in the crop remained keen and further planting was done in Kigezi and Bunyoro districts. The crop remained of minor importance, but propaganda for increased planting and closer attention to better cultural methods met with a good response from growers in Kigezi District.

36. *Antestia* remained a serious menace to the Arabica crop in all districts of the Western Province and, following on detailed surveys carried out by the Coffee Research Unit during 1957, large-scale spraying trials are planned for 1958: in Kigezi District a start was made during 1957.

37. In the Eastern Province, Robusta coffee is grown in Busoga and Bukedi districts. In the latter district cultivators were encouraged to plant small plots near their homesteads, and 8,900 seedlings were issued. In Busoga District the crop continued to expand, 73,390 seedlings being sold to growers during the year. It is estimated that over 6,000 acres of coffee have been established in Busoga District and that 1,770 acres were in bearing in 1957. Recorded sales during the year totalled 607 tons of dried cherry.

38. Coffee production in the Northern Province is confined to the West Nile District where Arabica is grown in the highlands and Robusta at the middle altitudes. The 1956 crop was sold in early 1957, and the equivalent of $8\frac{1}{2}$ tons of rough-hulled Arabica coffee was bought. Only small quantities of Robusta coffee were offered for sale. Total production of both types of coffee in 1957 is estimated at 12 tons of clean coffee.

39. Details of total production during the last eleven years are as follows:—

Table C.—African Coffee Production

(Other than Bugisu Coffee)

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Cured Coffee (Tons) ..	17,238	31,142	18,351	26,263	34,362	29,563	26,998	25,196	60,160	48,498	61,570

(iv) Estate Coffee Production

40. The output for the 1956/57 season was a record, 11,010 tons of clean Robusta and 857 tons of clean Arabica being produced. Most of the crop was sold on the Mombasa auctions, prices averaging £235 per ton for Robusta and £330 per ton for Arabica.

41. The following table shows production and estimated value of the coffee sold by estates during the last ten seasons:—

Table D.—Estate Coffee Production (Robusta)

Season	Production	Gross Value
	<i>Tons</i>	<i>£</i>
1947-48 ..	3,592	281,678
1948-49 ..	2,581	227,247
1949-50 ..	3,060	616,363
1950-51 ..	3,846	940,504
1951-52 ..	4,851	1,425,669
1952-53 ..	5,921	1,846,697
1953-54 ..	5,277	2,100,993
1954-55 ..	7,730	1,944,790
1955-56 ..	8,941	2,235,250
1956-57 ..	11,010	2,587,350

(v) New Legislation

42. In March, 1957, legislation amending the Coffee Industry Ordinance, 1953, and designed to give effect to the following main objectives of policy, became law:—

(1) to safeguard and improve the quality of Uganda coffee, and at the same time to maintain a reasonable degree of stability in the industry;

(2) to ensure coffee is processed and sold in the world market in such a way that the producer receives the maximum sustained return for his product; and

(3) to permit African interests and African growers increasingly to participate in the processing of their coffee.

43. Under the new legislation individuals or associations of growers may, under certain conditions, establish estate factories to process the coffee they grow by either the wet or the dry method. It remains illegal for growers to purchase or deal in coffee not grown by themselves. An "estate" is defined as an area or areas of land on which coffee is grown, which is lawfully occupied by one person or by a group of persons, who are members of an association of growers. The members of an association of growers may retain their individual ownership of the separate parcels of land which comprise the association's estate, provided that such land is reasonably near the association's factory.

44. The definition of an "association of growers" is any registered co-operative, all of whose members are African, or any other group of growers of coffee, which the Coffee Industry Board is satisfied markets coffee in accordance with co-operative principles. If a registered company or partnership claims that it should be treated as an association of growers it must produce evidence that, although not registered under the Co-operative Ordinance, it markets its coffee collectively in accordance with co-operative principles, and that its intention is only to process coffee grown by its members.

45. In order to safeguard the quality of coffee produced by estate factories legal permission to erect and operate a factory may be given only if it is of a standard and design approved by the Coffee Industry Board and, if the factory is to be used for pulping and washing, it has available an adequate supply of pure water. In addition, applicants for permission to erect estate factories must produce evidence that they have the necessary organisation and resources to erect and operate the factory efficiently and economically.

46. Under the new legislation African estate owners have the option of three alternative methods of disposing of their coffee:—

(1) they may export clean coffee under their own mark or sell to exporters in Uganda;

(2) they may ask the Coffee Industry Board to sell clean coffee on their own behalf; and

(3) they may dispose of their coffee in the same way as other African producers, who are not owners of state factories, by selling as either dry cherry or rough-hulled coffee to the controlled side of the industry.

47. In order that lack of capital shall not hamper the development of estate coffee factories owned by growers, arrangements have been made whereby loans up to a maximum of two-thirds of the value of the factory may be granted by the Uganda Credit and Savings Bank, provided the application is sponsored by the government departments concerned.

(c) Tobacco

(i) Flue-Cured

48. This crop is grown in the West Nile, Acholi and Lango districts in the Northern Province and in Kigezi District in the Western Province. Most of the crop is sold as green leaf, but a small amount is cured by individual farmers and co-operatives.

49. In West Nile District, 2,094 acres were planted for green leaf production, compared with 1,802 acres in 1956. The objective was 2,400 acres, but this was not reached owing to dry weather in the first half of May. Transplanting started in April and continued until July. Apart from the later plantings the crop did well and yields were higher than in 1956. The purchase of green leaf totalled 6,456,576 lb. which is the largest crop the district has ever produced. The Olili and Otrevu co-operative societies sold 23,214 lb. of cured leaf, compared with 13,726 lb. in 1956. Green leaf was bought, in all districts, in three grades at 10, 8 and 3 cents per lb.

50. In Acholi District the seedling disease which caused severe losses in 1956 re-appeared in March, causing quite heavy losses, initially. An effective method of control was applied by using a drenching spray of "Perenox" after sowing, and the planting programme was not seriously affected. The pathogen was identified as *Pseudomonas solanacearum* var. *asciaticum*. A total of 846 acres was established for green leaf production and farmers doing their own curing planted a further 195 acres. Total purchases of green leaf were 2,532,893 lb. which compares favourably with 1,132,932 lb. in 1956. Sales of cured leaf, all of which was purchased by the East African Tobacco Company, amounted to 51,000 lb., compared with 35,159 lb. in 1956.

51. As a sequel to successful experiments, conducted with miniature tobacco barns suitable for use by small individual growers, one grower in Acholi gave the new type of barn a trial and produced good quality cured leaf which included a high percentage of "brights".

52. The members of the Ngai Group Farm, who are the only producers of tobacco in Lango, did not have a successful year, only 1,653 lb. of cured leaf being produced from six acres.

53. In Kigezi District, marketing of the 1956 autumn crop was completed in February, total sales of green leaf being 672,000 lb. In the same month sowing of seed beds for the spring crop was started. Transplanting was done in March and April and the area planted was 300 acres. Dry weather in July caused rapid ripening of the crop and the amount of leaf offered for sale was in excess of the capacity of the curing barns. As all saleable leaf had to be bought it was necessary to abandon a proportion of the leaf after purchase. Total sales of green leaf were 622,720 lb. from which approximately 78,000 lb. of saleable cured leaf were produced. The autumn planted crop was estimated at 243 acres, but

owing to lack of rain during the main planting period it was not possible to stagger planting to the extent planned and it is expected that difficulty will be experienced because of lack of barn space, when buying reaches its peak in early 1958. The harvest started in December and the quality of leaf offered for sale was good.

54. Full details of production in all districts during 1957, compared with figures of the previous year, are given below:—

Table E.—Flue-Cured Tobacco Production

AREA	ACREAGE		PRODUCTION (Green Leaf)		PRODUCTION* (Cured Leaf)	
	1956	1957	1956	1957	1956	1957
			<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>
West Nile ..	1,866	2,181	1,878	2,882	6	10
Acholi ..	642	1,041	506	1,130	16	23
Lango ..	21	7	—	—	1	1
Kigezi ..	372	543	363†	578‡	—	—
TOTAL ..	2,901	3,772	2,747	4,590	23	34

* Cured by individual farmers and co-operatives.

† 1955 Autumn and 1956 Spring Crops.

‡ 1956 Autumn and 1957 Spring Crops.

(ii) *Air-Cured*

55. The cultivation of this type of leaf is confined to West Nile and Mubende districts, production in Kigezi having been discontinued after the 1956 autumn crop, owing to the risk of over-production. Production from this latter crop, which was marketed in early 1957, was 120,960 lb. of cured leaf.

56. In West Nile District transplanting started in April and was completed in June. Dry weather in the first half of May reduced planting and the final acreage was 1,078 compared with 1,268 acres in 1956. Apart from the later plantings the crop grew well. Marketing took place during the last quarter of the year and the total crop was 576,039 lb. of cured leaf which represents a mean yield of 534 lb. per acre. The 1956 crop, which was the largest ever, amounted to 777,966 lb. of cured leaf. The prices paid to growers (in all districts) was increased during the year to Shs. 1/20 per lb. and 80 cents per lb. for grades 1 and 2, respectively.

57. There was a reduction in the acreage in Mubende District, 440 acres being planted, compared with 585 in 1956. Yields were higher than in the previous season as a result of more favourable weather. The total production was 251,712 lb. of cured leaf, compared with 238,999 lb. in 1956. As in West Nile the variety grown was Heavy Western.

58. Details of production in the last two years are given below:—

Table F.—Air-Cured Tobacco Production

AREA	ACREAGE		PRODUCTION (Cured Leaf)	
	1956	1957	1956	1957
West Nile ..	1,268	1,078	<i>Tons</i> 347	<i>Tons</i> 257
Kigezi ..	278	—	33	54*
Mubende ..	585	440	107	112
TOTAL ..	2,131	1,518	487	423

* Autumn crop 1956 marketed in 1957.

(iii) *Fire-Cured*

59. Growers responded well to the production drive in Bunyoro District and the acreage rose from 3,751 acres in 1956 to 5,044 acres in 1957. The standard of cultural operations improved, particularly that of spacing and weeding. The good early rains benefited the crop and losses from hail were low. Marketing began on 8th October and continued until 4th December. The total crop was 2,644,059 lb. of which 1,881,029 lb. was Grade 1. The prices paid to growers were Shs. 1/20 per lb. for Grade 1 and 80 cents per lb. for Grade 2.

60. It was estimated that 931 acres were planted in Mubende District, compared with 1,031 acres in 1956. Better attention was paid to cultural work than in previous years. The early rains favoured the crop by permitting timely opening of land, and the rain during the main growing period was adequate. Yields per acre were higher than in 1956 and the total crop was 615,186 lb. of cured leaf, which is equivalent to an average yield of 661 lb. per acre. In 1956 the crop amounted to 358,264 lb. of cured leaf.

61. Details of production in the two districts during 1957 compared with the figures of the previous season are given below:—

Table G.—Fire-Cured Tobacco Production

AREA	ACREAGE		PRODUCTION (Cured Leaf)	
	1956	1957	1956	1957
Bunyoro ..	3,751	5,044	<i>Tons</i> 797	<i>Tons</i> 1,180
Mubende ..	1,031	931	160	275
TOTAL ..	4,782	5,975	957	1,455

(iv) *Development of Overseas Markets*

62. Arising out of enquiries as to the prospects of export markets for air-cured and fire-cured leaf, and in view of the risk of over-production of dark leaf, particularly air-cured, licences were issued to a London firm

of leaf buyers for the purchase of fire-cured leaf in Bunyoro District and air-cured leaf in Mubende District. The firm concerned finally exported 160 bales (23,336 lb. net of conditioned leaf) including both types of tobacco. This development represents no change in Government policy in regard to the needs of the local manufacturer, the aim being to find an export market for leaf in excess of requirements within East Africa.

(d) Oilseeds

63. Production of seed from the 1956/57 cotton crop was approximately 137,400 tons of which 114,852 tons were sold for crushing or export at an average price of Shs. 443/30 per ton. Planting accounted for 20,818 tons whilst 930 tons were used for fuel, a balance of 800 tons remaining on hand at the end of the year.

64. The acreage under groundnuts in the Eastern Province showed a slight increase over that of 1956. Sales of shelled nuts in the province were estimated to be 13,700 tons compared with 14,000 tons in 1956. As statutory control is not exercised over the marketing of the crop, precise figures of the amounts sold are not available.

65. The price paid for castor seed fluctuated between 20 and 40 cents per lb. and it is estimated that 2,000 tons were bought in Buganda Province during the year.

66. Production of sunflower seed in the West Nile District amounted to 140 tons compared with 120 tons in 1956. The price paid to growers was 16 cents per lb.

(e) Maize

67. Owing to the poor prices paid in 1956 there was a marked drop in the acreage under this crop in Buganda, only 138,781 acres being planted, compared with 211,487 acres in 1956. The early rains enabled a high proportion of the crop to be sown early and this fraction of the acreage gave yield above average. A large proportion of the crop was consumed in the green state. Prices offered average from 6 to 7 cents per pound and, in consequence, farmers made little attempt to pick over the grain before marketing and grade was lower than usual. The moisture content of the grain offered for sale was lower than usual. In the Eastern Province, the crop was planted early and yielded well. In Busoga District, which is the main producing area, the acreage planted decreased by 20,000, the total acreage for the province being 123,238, compared with 142,132 in 1956. Prices paid to growers averaged approximately 8 cents per pound. In the Western Province there was a decrease of 10,000 acres in the area planted. Yield were about average, but only small quantities of grain were offered for sale. The total marketable surplus in the Protectorate was estimated at 45,000 tons, but in the absence of any statutory obligation upon buyers to submit returns, there is no means of knowing whether this estimated surplus was sold.

(f) Tea

68. During 1957 licences were issued for the planting of an additional 1,010 acres. The total licensed acreage at the end of 1957 was 25,323 acres. The total area of planted tea at the end of the 1957 was 13,061 acres. Production during the year amounted to the record figure of 8,025,615 lb. of made tea compared with 6,801,314 in 1956.

(g) Sugar

69. A total of 16,681 acres of mature cane was harvested during the year and sugar production from the two estates was 80,774 tons, which surpassed last year's record production by over 11,000 tons. Exports to Kenya and Tanganyika totalled 22,844 tons, compared with 12,993 in 1956.

(h) Sisal

70. Exports of sisal from the one estate near Masindi amounted to 361 tons, compared with 634 tons in 1956.

V. AGRICULTURAL DEVELOPMENT AND EXTENSION WORK

(a) Soil Conservation

71. Uganda is fortunate that the intensity of rainfall is rarely so great that it cannot all be absorbed into the soil if good farming methods are practised. That is not to say that the fertility of the soil is not imperilled by run off of water and by soil erosion when farming is slovenly.

72. The field staff of the Department strove unceasingly to encourage cultivators to adopt the many practices which in aggregate serve to conserve water and to protect the soil. Greater use was made of wireless broadcasting for propaganda, particularly in Buganda where receiving sets are most numerous.

73. Annual agricultural betterment competitions between administrative divisions throughout the county were again keenly contested and many were judged by senior members of the Department. The standard of soil conservation attained by the winners was very creditable. In Mengo and Mubende districts of Buganda many additional miles of tied bunds were constructed and anchored with grass, but progress was slower in Masaka District. Throughout the country house compounds and paths were protected with bunds of planted grass, row crops were planted on the contour, ground crops such as beans and groundnuts were inter-planted between rows of taller crops and root crops were grown in contour ridges; hillside communal grazing grounds and other over-grazed areas were closed to grazing by order of local councils and erosion was restrained on cattle tracks. In the Eastern and Northern provinces it is now customary farming practice to leave stop-wash lines of uncultivated land at intervals in arable plots and to construct grass bunds in perennial crops. A good standard of soil protection was maintained. Grassed bunds, stone walls and lines of crop trash were used to check the flow of water and conserve

the soil on cultivated land in the Western Province. Indiscriminate burning, followed by heavy grazing impoverished the grass cover on the permanent grazing grounds in Ankole, Toro and Kigezi districts and bye-laws to control burning were under discussion by the local councils. In the over-grazed areas of Karamoja District a more intensified search was made for a practicable means of restoring the stable grass cover to the soil and to control bush encroachment, and an additional agricultural officer was posted there to take charge of the work. Elsewhere in the Northern Province there was progressive improvement in the standard of soil conservation.

(b) Agricultural Education

(i) Main Farm Institutes

74. Since His Excellency the Governor laid the foundation stones of the two main farm institutes, Bukalasa in Mengo District and Arapai in Teso District, in September and November of 1956 great progress has been made, not only with the erection of the buildings, but with the establishment of the farms. It was possible, albeit with a good deal of improvisation, to open the institute at Bukalasa in February, 1957, whilst Arapai will be ready in February, 1958. Bukalasa is representative of the elephant grass zone of the Protectorate and Arapai of the short grass areas; the teaching of agriculture under the two main ecological conditions of the Protectorate is thus catered for.

75. The general aim of the main farm institutes is to provide adequate facilities for the following:—

(a) to enable farmers to obtain a thorough grounding in farm practice and management with a view to building up an independent yeoman farmer community;

(b) to produce field staff for the agricultural and veterinary departments with a sound knowledge of agriculture and capable of giving sound and practical advice to farmers;

(c) to provide teaching staff for the district farm institutes when they are established. Such staff will have to undergo a teachers training course after completing the agricultural course;

(d) to provide common basic training for agricultural and veterinary staff, with a view to achieving the maximum degree of co-operation between the two departments;

(e) to provide agricultural instruction to serving teachers who will thereafter teach in junior secondary schools and in training colleges. Later teachers will be trained in agriculture to a level which will enable them to teach the subject to School Certificate level.

With these aims in view a two-year course of basic agricultural training, with a practical bias, is provided. Students will be given sufficient theory to enable them to understand the reasons for the agricultural practices and operations undertaken. The training is designed to provide a sound

knowledge of farming, and an appreciation that farming is a business which require managerial skill as well as agricultural know-how.

76. As mentioned above, Bukalasa Farm Institute opened on the 22nd February, 1957 with 50 students, of whom seven had School Certificates; the remaining students were Junior Secondary III or Senior Secondary I to IV. Time devoted to teaching was divided between academic and practical work with a slight bias to the former. Practical work consisted of demonstrations in the laboratory and on the farm and work on the farm; field training outside the institutes will be given later in the course. In addition to the normal curriculum, 12 lectures on matters of general agricultural interest were given during the year by outside lecturers. Forty-seven students successfully completed the first year of their two-year course.

77. It was originally planned that students wishing to enter Government service should receive a further year's specialised training at departmental training schools. In the case of students entering the Veterinary Department this plan will be followed, but with those entering the Agricultural Department it is now decided that the third year's specialised training will be given at the institutes. Therefore, the accommodation at the institutes will be increased to provide for a maximum of 180 students.

(ii) *District Farm Institutes*

78. In addition to the two main farm institutes, it is proposed ultimately to establish eight district farm institutes which will offer courses of training of one year's duration to farmers and shorter courses to chiefs, cultivators, prison warders and others. Where possible these institutes, and district training centres built by the Community Development Department, will be sited together, so that services may be shared and the training integrated. During the year sites were selected in four districts and site plans are in course of preparation in readiness for building in 1958.

(iii) *Farm Schools*

79. These schools, which are still regarded as experimental, provide a two years' post-primary practical course in agriculture, and cater mainly for boys academically unsuited for higher studies, who wish to take up farming as a career. These schools will be complementary to the training to be provided at district farm institutes. During the year a new school was opened at Gulu in the Northern Province by the Native Anglican Church, bringing the total in the Protectorate to five. At the Acholi Farm School, near Gulu, which is the oldest of these schools, 11 pupils successfully completed their training and left to start two group farms in the district. The Aler Farm School, in Lango District, after receiving a setback as a result of damage done by demonstrators during the disturbances in the district in 1956, had a successful year, 28 students being in residence. The majority of ex-pupils of the school continued to run their group farms satisfactorily and remained keen on the work. Applications to join the school in 1958 totalled 50. In Teso District,

the Amucu Farm School began its first course in March with 30 students. Excellent progress was made with the development of the school farm, 60 acres being opened up and planted during the year.

(iv) *General*

80. The usual short courses for chiefs and farmers, prison warders and others were discontinued at Serere, except for refresher courses given to agricultural assistants (research) in charge of cotton variety trial centres. The short-term training previously offered by Serere is to be taken over by the district farm institutes. At Bukalasa, the farmers' and chiefs' courses were continued. At the request of the trainees, the duration of each course was extended from one to two weeks. One hundred and fifty-one people attended the courses, among them 13 women. As in previous years, short local courses for chiefs, farmers and members of co-operative societies were held in the districts, in many cases at minor experiment stations. Refresher courses for agricultural assistants were also held in the districts. In the Eastern Province, colour films and slides added greatly to their value. Schools were encouraged to have gardens and advice was given on their layout. Prison farms continued to demonstrate improved farming, particularly where it was possible to fence the fields and to integrate cattle into the farming system. County and sub-county shows again proved very popular, and afforded excellent opportunities for the dissemination of agricultural propaganda and for demonstrations; eleven shows were held in the Eastern Province alone. Agricultural competitions, embodying all aspects of better farming, have become annual events in most districts.

(c) *Animal Husbandry and Pasture Work*

81. In areas where local circumstances permit, it is the policy of the Department to encourage the integration of livestock into a system of mixed farming. The traditional system of communal grazing is still practised in most parts of the Protectorate and with communal ownership of land there is no incentive to the individual to conserve the pasture or to increase its productivity. Moreover, enclosure is expensive and is also liable to be opposed by the less progressive members of the community. There is, however, evidence of a movement from communal to individual herding (which is the first step towards mixed farming) and also of an appreciation that grassland can be made more productive and that stock and crops can be complementary. In Buganda more grazing land is being enclosed and this is frequently followed by digging out *Cymbopogon afronardus* and other undesirable grasses and weeds. Unfortunately, the paddocks are usually kept isolated from the rest of the farming system. On the other hand, kraal manure is much used for application to the coffee crop and, particularly where grazing is scarce, the cattle often receive supplementary feed.

82. In Teso District the use of movable barbed wire kraals is becoming increasingly popular. The chief drawback to this practice is that farmers tend to leave the kraals in one place too long, so restricting

the area receiving manure. Compost making was encouraged with success in Bukedi District, particularly in Pallisa and West Budama counties, but there was little progress in the use of kraal manure. In Bugisu District cattle manure was used extensively to raise coffee yields, but it was not used to the best advantage as only the plots near the supply received it.

83. In Lango District interest in night paddocks was maintained and the field staff continued to assist in fencing them. A number of progressive individuals enclosed a series of paddocks for rotational grazing. A large-scale demonstration of 160 acres was laid down in Ankole District to show cattle owners the improvement in pastures resulting from eradicating *Cymbopogon afronardus* and from controlled burning. In Kigezi District, feeding stock with fodder beet, elephant grass and banana peelings was encouraged successfully, whilst grazing was improved by digging out *Cymbopogon*, followed by controlled rotational grazing. In Kamwezi Gombolola of Kigezi District, over 100 acres of fenced and improved paddocks were established. At Kachwekano Farm it was shown that night paddocking and controlled rotational grazing result in a luxuriant sward of Kikuyu grass (*Pennisetum clandestinum*).

(d) Irrigation and Swamp Reclamation

84. The flood irrigation scheme at Ngiminito in Karamoja District experienced a difficult year. Rainfall was unusually low and floods infrequent, and it was not possible to irrigate satisfactorily. The yields of all crops grown, both in the departmental plots and those rented by the local people, were low. In the same district the irrigation scheme near Namalu, which is watered by a permanent stream from Mount Debasien, continued to produce a wide range of crops, including finger millet, maize and vegetables.

85. In Toro District a small irrigation scheme was surveyed by the Water Development Department at Nyakatonzi, and by the end of the year the construction of the channel bringing water to the area from the Kanyampara River was nearing completion. The purpose of the scheme is to obtain data on the growing of sugar-cane under irrigation; it is also planned to grow cotton experimentally, and to provide domestic water supplies for the people who intend to come and live in the lowland areas.

86. The trials laid down in 1956 by the Kakira Estate in Busoga District to investigate the possibilities of increasing the yields of sugar-cane by irrigation were continued. The area of the trials is 150 acres of which 50 acres are watered by furrow and 100 acres by sprinkler. So far experience has shown that the overhead method, although more costly to install, is easier to operate. The condition of the cane under sprinkler irrigation is very promising, but no yield figures are yet available. The indigenous system of irrigation employed in the three small areas in the Agoro locality in east Acholi District were again brought into use. The chief crop grown was sweet potatoes.

87. Swamp fringes in many parts of the Protectorate were used for dry season planting of sweet potatoes and, to a lesser extent, of other crops, such as beans. In the heavily populated areas of Kigezi District, the possibilities of cropping reclaimed swamps are being examined in co-operation with the Water Development Department. The main works are on four large swamps parts of which are being drained and brought into cultivation.

(e) Resettlement

88. The movement of people from the over-populated areas of south Kigezi District into the resettlement areas in the north of the district, and in Ankole and Toro districts, proceeded slowly. In north Kigezi, 4,049 persons took up residence in the various areas selected for resettlement. Work was concentrated in the Kihikihi, Rwanga and north Rhuzumbura areas, and large acreages of new land were opened. Roads were built, water supplies provided and holdings varying in size from twelve to seventeen acres were demarcated. In Toro District, 1,567 persons moved into the Bigodi and Nkongora areas. In Ankole District, where the emphasis was on the consolidation of the tsetse barrier, in the Chezo, Oruchinga and Bigera river valleys, excellent progress was made in the Bigera River area where the objective of 200 families was more than attained. Progress in the Chezo and Oruchinga river valleys was slow.

89. In the Amuria County of Teso District the resettlement area was fully occupied, each block of 24 acres being taken up by a family by the end of the year; 468 families have been settled. In south Busoga, occupation of the resettlement area proceeded slowly, only 42 families having moved in by the end of the year.

(f) Kigumba Settlement Area

90. The 20,000 acres originally leased to the Bunyoro Agricultural Company have been taken over by Government and are being used for planned settlement, except for a thousand acres which are being farmed by the Department for pedigree cotton seed increase. The settlement scheme in addition to increasing production of crops will serve as a tsetse barrier. Attempts to encourage local Banyoro to take up land in the area met with very little success. A number of Sudanese was settled, but it was not until Maragoli tribesmen from Kenya began to show interest in the scheme that any appreciable progress was made. Of the 63 holdings which have been allocated, 42 are occupied by Maragoli. An additional 200 holdings have been demarcated in readiness for additional settlers who are expected in 1958.

(g) Liaison with African Local Governments

91. Close liaison was maintained in all aspects of agricultural development and co-operation was readily forthcoming in such matters as agricultural competitions, county shows and the running of African Local

Government prison farms. The enforcement of Agricultural Bye-laws was dilatory in some districts but, in general, they served the purpose for which they were enacted. In Ankole District the Eishengyero passed a land settlement bye-law which provides for the orderly occupation of resettlement areas.

(h) Mechanical Cultivation

(i) General

92. The policy for the development of mechanical cultivation remained unchanged, but it became increasingly apparent that there was little hope of any commercial organisation launching a hire service and that the main spearhead of development must be the departmental contract hire service, moving to new centres of development as farmers in proven areas purchase their own tractors.

(ii) Contract Hire Service

93. Tractor units were maintained by the Special Development Section of the Department in Buganda Province and in Bunyoro, Acholi, Lango, Busonga and Teso districts. The Busoga unit was closed down owing to lack of support, but new centres were opened in east Acholi and at Kasese in Toro District. The total area cultivated by all units rose to 6,172 acres compared with 5,534 in 1956. The demand for the service remained quite keen, but was not concentrated. At no time was any unit hard pressed to meet its commitments. The mean number of hours worked per tractor during the year was only 556, which indicates that only approximately half the potential was utilised. This low number of hours worked was partly attributable to the development of new areas, but the main factor was the widely scattered demand, which could not be offset by expanding the individual areas served by tractor units, owing to the disproportionate increase in unproductive travelling and transport. Hire charges were slightly reduced in the Northern Province and this appeared to increase the demand. In 1958 it is intended to reduce the charges further in the existing operational areas in the hope of increasing the amount of work offered. As in previous years, the greatest demand was for initial cultivations. A total of 37 tractors worked during the year, of which 24 were Ferguson and 13 Farmall B.E.M. Details of acreages cultivated on contract work were:—

Province or District	Ploughing	Disc harrowing and tilling	Planting	Weeding and ridging
Buganda	837	—	42	—
Bunyoro	653	—	—	—
Toro	730	637	—	—
Acholi (and north Lango) ..	2,283	417	—	66
Lango (south Lango) ..	426	23	—	—
Busoga	54	—	4	—
TOTAL ..	4,983	1,077	46	66

94. Only wheeled tractors were used in the above operations. Three caterpillar tractors also operated a bush clearing service. The following are the details of hours worked on bush clearing:—

<i>Type</i>		<i>Hours</i>
D.8	...	240
D.6	...	589
D.4	...	97

95. The total revenue earned by all tractors for all operations was Shs. 362,397/-. In addition, work valued at Shs. 76,399/- was done on departmental farms.

(iii) *Purchase of Tractors by Farmers*

96. The policy was pursued of encouraging private ownership of tractors, by individuals, farmers' group and co-operatives possessing the necessary resources and skill and there are signs of success. Outside Buganda Province seven privately owned tractors were operated and several other farmers showed interest in purchasing their own equipment. So far group-owned tractors have not worked as efficiently as those owned by individuals. Advice and assistance with repairs are made available to all African tractor owners and it would appear that this will become an increasingly important function of the Special Development Section. In Buganda, where there is a considerable number of privately-owned tractors, owners found it difficult or were reluctant to pay for spares and maintenance and the number kept in running order was small.

(iv) *Investigational Farms*

97. During the year it was decided to close down Butasindirwa Farm in Singo County of Mengo District. The farm, in addition to its function as a proving farm for mechanisation, served as the base for the Singo County tractor unit which carried out all mechanical cultivation required on the farm when the unit's equipment was not needed for contract work. Unfortunately, low maize prices in 1956 and 1957 greatly reduced the demand for mechanical cultivation in the county and it was necessary to move the unit elsewhere. It was considered that the expense of maintaining the farm could not be justified once it had ceased to serve as a tractor base. The testing of new mechanised farming techniques will be moved to Senge Farm in Mengo District in 1958.

98. Kigumba Farm in Bunyoro District, which was originally part of the land developed by the Bunyoro Agricultural Company, was operated by the Special Development Section for the multiplication of pedigree cotton seed. The farm's function is to produce the greatest possible quantity of cotton seed and give scope for testing mechanical cultivation techniques on a large scale. The total area planted was 160 acres, all of which was planted before the end of June, and sprayed against *Lygus*. Despite the dry weather during the third quarter of the year, the crop grew well and is expected to average over 800 lb. of seed cotton per acre.

(v) *Machinery Testing and Development*

99. This work was continued in close co-operation with the East African Tractor & Implement Testing Unit. During the year the Unit started an extended test of four new tractors at Serere Experiment Station. The performance of the tractors (Fordson Major diesel, Nuffield D.M.4, Ferguson F.E. 35 diesel and Ferguson F.E. 35 petrol) will be checked over a period of 2,000 hours work.

100. Based on the advice of members of the Unit and of the Special Development Section, a tractor is being fitted with special equipment against dust, dirty fuel, and bad maintenance. It is hoped to achieve a tractor working life of 5,000 hours. Other experimental work on the modification and fabrication of equipment included the following projects:—

- (a) a combined ridging, ridge-tying and planting implement performing all three operations in one run of the tractor;
- (b) mechanised inter-row coffee weeding;
- (c) a small thresher for finger millet;
- (d) finger millet header;
- (e) hand tools to permit row planting and inter-row weeding.

(vi) *Namalere*

101. The Special Development Section took up residence at Namalere in May, 1957. The new headquarters, in addition to being the administrative centre of the section, provides a central stores organisation, together with well-equipped workshops capable of dealing with major overhauls which are beyond the scope of district workshops. The main workshops also provide facilities to the Agricultural Engineer to carry out his experimental programme.

(vii) *Tractor Training School—Namalere*

102. The school held its first course of instruction during the year. The course, which was of three months duration, was designed to give instruction in the use of agricultural equipment to farmers owning tractors and ancillary machinery. The emphasis was placed on fitting machinery into a farming system rather than upon the purely mechanical aspects. The response of the students was most encouraging and it is believed that the courses have an important role to play in the proper development of mechanical cultivation in Uganda.

(i) *Ox-drawn Equipment*

103. The policy of the Department is to encourage the use of ox-drawn equipment in new areas and, at the same time, to widen the range of equipment used. Particular attention is being given to inter-row cultivators, which are at present little used even in areas where the ox-plough is firmly established.

104. In Buganda, the ox-ploughing demonstration unit established in north Bugerere did not arouse much interest from farmers and, similarly, in Masaka District few farmers took advantage of the training facilities provided. Work in the Eastern Province was concentrated on the development of row cropping and inter-row cultivation. The greatest progress was made in Teso District where 51 ox weeders were sold. Little progress was made in persuading farmers to introduce row cultivation for crops traditionally broadcast. In the Northern Province courses on ox training were given at Ngetta Farm, emphasis being placed on the training of oxen for inter-row cultivation. A total of 497 people attended the courses. In the same district eight cultivators were purchased by farmers during the year. In West Nile District, where little use is made of oxen for draught purposes, the ox-ploughing team continued to work on contract to demonstrate the use of ploughs. In Acholi District, ploughing teams were formed at Labora Farm and it is hoped to start demonstrations in 1958. In the Western Province demonstrations were given at county shows, but interest in the use of ox-drawn equipment was small.

(j) Farm Planning

105. The newly formed Farm Planning Unit began work during the year and aroused farmers' keen interest. In Kigezi District, where the special problem of land fragmentation exists, 17 farms were re-designed to increase the efficiency of the existing farming system, as a first step towards the adoption of fully planned programmes on consolidated holdings. Elsewhere in the Protectorate, most interest was shown in Teso, Bugisu and Bukedi districts, whilst in Buganda there was a good response to propaganda, and it is hoped to start work there in 1958. In Teso District, six farms were fully planned during the year and a further six await planning. A similar number of farms was planned in Bugisu District and further applications were received. In Bukedi District seven farms await planning. So far the planned farms have been managed well and farmers have kept careful records, including full details of income and expenditure.

106. As a result of experience gained whilst planning individual holdings in the Eastern and Western provinces, it has been decided to limit the number of planned farms in any one district (with the exception of Kigezi District) to 12 for the present. The Farm Planning Unit, which hitherto has been purely advisory, has recently assumed executive responsibility for planning these farms; the Unit will also supervise the keeping of detailed farm records which will provide information on the various farming systems practised in the different ecological areas. The economics of these varying systems will also be worked out. No rapid extension of farm planning is envisaged until the results obtained from these original farms have been critically analysed. In Kigezi District, farm planning will remain the responsibility of the District Agricultural Officer and his staff, with the Officer-in-Charge of the Farm Planning Unit acting in an advisory capacity.

VI. INVESTIGATIONS

(a) Soils and Natural Vegetation

(i) *Soil and Vegetation Surveys*

107. These major projects progressed according to schedule. The soils of more than half of the Protectorate have now been mapped on the scale of 1:250,000. During the year Masaka, Mubende, Bugisu, Teso, Lango, Acholi and Toro districts were completed on this scale, together with Pian, Karasuk and Bokora counties of Karamoja on the scale of 1:50,000. Vegetation of 20,000 square miles has been mapped on the 1:250,000 scale, comprising Busoga District, the major part of Teso District, substantial areas of Bugisu, Lango, Acholi and West Nile districts and, on the 1:50,000 scale, the three above-mentioned counties of Karamoja.

(ii) *Plant Taxonomy*

108. The herbarium has been brought into an up-to-date working order and has been used much more extensively for plant identification purposes, especially by the survey officers.

(iii) *Soil Physics*

109. The well known beneficial effects of farmyard manure on soil tilth have usually baffled the ingenuity of physicists when they have tried to express them as an objective laboratory measurement. The physics section of E.A.A.F.R.O. has recently applied its techniques for measuring soil-water relationships to the soils of the Permanent Manurial Experiment, Serere (now in its twentieth year), and significant differences have been demonstrated in actual moisture content, under a standard tension of 330 cms. water in static percolation rates and in rainfall acceptance rates.

(iv) *Soil and Plant Chemistry*

110. Nitrate accumulation studies were continued and again confirmed that this phenomenon has little to do with capillary uplift. Favourable microbiological and climatological conditions working on adequate supplies of soil humus were found to be the chief factors concerned. Certain legumes proved beneficial as green manures, on account of the promotion of higher nitrate levels and of their ability to fix atmospheric nitrogen. "Provence" lucerne and Kenya white clover showed great promise as soil improvers. In a sand culture experiment with tea, potassium was shown to be deleterious above 500 p.p.m.K. In a pot experiment with soils of varying potassium content, boron deficiency syndromes appeared accidentally in young tea plants and were seen again in both soil and sand culture experiments.* This is the first time in the history of the tea bush that its boron deficiency syndrome has been demonstrated.

(v) *Soil Amendments—Fertilisers*

111. Of the 13 formal fertiliser trials that were run during the year, only three gave profitable returns. At Ngetta, on old land, a 1,025 lb.

*Nature (1958), 181, 426.

per acre control yield of seed cotton was significantly increased to 1,677 lb. per acre by 40 lb. P_2O_5 , broadcast as double supers. This increase is highly economic, for an outlay of Shs. 31/- brought in Shs. 380/-. It is noteworthy that this trial was sprayed to control *Lygus* and its overall yield was very much greater than the average for the farm. At Kawanda, also on old land, a low yield of 214 lb. per acre of seed cotton was increased to 379 lb. by an application of one cwt. of sulphate of ammonia placed at the time of squaring. This was also highly profitable—an investment of Shs. 33/- bringing in Shs. 96/-. In a trial with Arabica coffee at Bugesege, dressings of sulphate of ammonia were profitable. Each pound of fertiliser, costing 28 cents gave a return of 0.77 lb. of parchment worth at least Shs. 1/77. Trace elements were applied in three experiments, but yield increases were barely significant and certainly not economic. In Teso District, 144 paired plots of finger millet, with and without mixed fertiliser, gave hopeful signs of the value of fertilisers in that 60% of the plots treated gave a profitable increase of more than 400 lb. of grain per acre.

(b) Annual and Medium-Term Crops (Botanical Investigations)

(i) Maize

112. Attempts were made to shorten the life cycle of the variety Muratha by recurrent selections and by hybridisation with the early maturing variety K8. An improved seed bulk has been obtained and it is now ready to be tested against the best local varieties.

113. Work was continued on the improvement of the varieties Muratha and K.8 in respect of their resistance to Tropical American Maize Rust *Puccinia polysora*. Resistance was transferred to both varieties from two tropical American varieties A.F.R.O. 24 and A.F.R.O. 29. Final selections for resistance and high yielding are complete for Muratha, but further selection for high yield is required for K.8.

114. Early maturing and rust resistant maize is unusually susceptible to leaf blight *Helminthosporium turcicom*. Selection for resistance to this disease has only just begun, but meanwhile a partial control has been found with the organo-sulphur-zinc chemical "Zineb". In Muratha increased yields from heavier cobs ranged from 28% to 50% of controls and in K.8 and A.F.R.O. 53200 from 39% to 184% of controls due both to more and heavier cobs.

(ii) Sugar-cane

115. Satisfactory increases in ratoon yields, which are usually much reduced by "Ratoon Stunting" disease, have been obtained by heat treatment. In the heat treatment experiment at Bukalasa the first ratoon crop was harvested when twelve months old. Heat treating four hybrid varieties gave a 36.5% increase on a control yield of 27.4 tons of cane per acre. A sample of ten canes was taken at random from each plot and measured. Cane from heat treated material had made more nodes with a longer internodal length than the controls, and also had a greater girth; in spite of

this, however, there was no difference in the weights of the individual canes. The reduction of yield by the disease appears to be brought about by the production of less tillers.

(iii) *Sorghum*

116. Breeding and selection has begun on sweet, large-glumed varieties which will be bird-resistant, and possibly mirid and weevil resistant. In Karamoja where it is usual to find up to 20% sorghum heads diseased with smut *Sphacelotheca sorghi* complete control and increases in stand were obtained by using seed dressed with "Fernason D" (= 20% gamma BHC + 25% thiuram).

(iv) *Finger Millet*

117. Selections have been made for earliness in ripening seed, stiffness of straw and ease of removal of the pericarp. The validity of the erection of a new species name for the "wild headed Ekitu" seed contaminant has been strengthened by chromosome counts. "Ekitu", now *Eleusine africana* is a tetraploid, whilst the smaller *E. indica*, with which it was confused, is a diploid.

(v) *Bulrush Millet*

118. An 85-day variety imported from Nigeria has yielded very well, giving 1,000 and 1,500 lb. of grain per acre at Labora and Serere respectively, when planted in late July in poor soil. Little trouble from birds was experienced. Due to its short period of flowering it is markedly resistant to *Sphacelia* disease.

(c) Annual and Medium-Term Crops (Entomological Investigations)

(i) *Cotton*

119. A series of 100 plots was laid down, mainly in the S.47 area, to test, on farmer's plot scale, the most likely insecticidal control for *Lygus*; the spray treatment was 1 lb. DDT per acre for four applications spaced at ten-day intervals. Cumulative picking figures to 31st December, 1957, indicated that satisfactory yield increases resulted in Bunyoro (increase of 251 lb. per acre); Omoro (Lango) (increase of 176 lb. per acre); Anyeke (Lango) (increase of 167 lb. per acre) and Lakwatomer (Acholi) (increase of 314 lb. per acre); in south Teso an increase of 110 lb. per acre was achieved, but this increase was not sufficient to cover the cost of treatment; the minimum economic increase is about 130 lb. per acre. (All yields refer to seed cotton per acre).

120. Examination of the relationship between time of planting and response to spraying makes it abundantly clear that in the eastern and northern zones by far the greatest increases in yield from spraying, and the highest total yields, are obtained with very early planted cotton. The optimum time for planting in these zones, when the cotton is to be sprayed, would appear to be late May.



PLATE I.—Training oxen at Ngetta Farm, Lango District.
[*Photograph by Department of Information*].



PLATE II.—Ox-ploughing in the Northern Province.
[*Photograph by Department of Information*].



PLATE III.—Tractor Training Course, Namalere.—Demonstrating the setting of a disc plough.
[*Photograph by Department of Information*].



PLATE IV.—Tractor Training Course, Namalere.—Lecture on tractor layout. [Photograph by Department of Information].



PLATE V.—General view of Bukalasa Farm Institute. [Photograph by M. F. Merchant].



PLATE VI.—Spraying against lygus bug on cotton. [Department of Information Photograph].



PLATE VII.—Banana Weevil Control.—Applying Dieldrin dust to base of stem with Shaker Duster.
[*Photograph by Department of Information.*]



PLATE VIII. Banana Weevil Control.—Preparing weevil trap using bag duster. [Photograph by Department of Information].



PLATE IX.—Inspecting Robusta coffee prior to purchase at a buying store in Masaka District. [Photograph by R. G. Hampson].

121. It has become evident that many mirid genera other than *Lygus* are associated with damage to cotton. Two of the more important of these genera are *Megasoelum* and *Creontiades*. Studies of these bugs have been started with particular reference to their taxonomy, the damage done by each to cotton plants, the inter-relations of this damage and the off-season habitats of each of the genera. Laboratory stocks of *Megasoelum* and *Creontiades* have been established.

(ii) *Bananas*

122. The experiments on control of the Banana Weevil *Cosmopolites sordidus* have been completed and recommendations for its control have been included in a departmental bulletin, and an account has been published in the East African Agricultural Journal.*

(iii) *Miscellaneous Pests*

123. An experiment to control Carpenter Bees (*Xylocopa spp.*) has been completed and written up for publication. A 1% solution of "Dieldrin" gives good protection to wood for at least ten months. 0.5% "Dieldrin" dust has been used successfully against various termites.

124. "Endrin" at 4 oz. per acre was found to give a high percentage (90%) kill of aphids on cotton; the same insecticide also gave excellent control of Spiny Bollworm (*Earias spp.*) on cotton, applied at 8 oz. per acre.

125. "Malathion" was found to give good control of the Maize Tassel Beetle, *Megalognatha rufiventris*, and of aphids on Citrus, at $\frac{1}{4}$ pint 50% emulsion, in four gallons of water. "Malathion" with banana bait successfully controlled Fruit Flies, *Drosophila spp.* occurring in large numbers in some houses.

(iv) *Pests of Stored Produce*

126. *Maize—Crib Storage.*—Two trials were completed, on the influence of husks on storage and the use of BHC powder. Tight shucks protect the maize for three to four months before infestation becomes serious, and do not greatly affect the drying rate. Eight oz. of 0.5% BHC per nine cu. ft. of cobs (200 lb.) gave excellent control of Rice Weevil *Calandra oryzae*. A trial is in progress comparing full versus half dosage; meanwhile the rate given above is being recommended as standard procedure for maize protection.

127. *Beans—Drum Storage.*—Very good results were obtained using 8 oz. of a 0.04% BHC dust to 200 lb. of beans stored in iron drums. Almost complete protection was achieved over a period of six months.

128. *Treatment of Stores.*—50% DDT (wetttable powder) at a dosage of 8 oz./1 gall. water/1,000 sq. ft. wall surface, has been found remarkably persistent under Uganda conditions, good kills of *Calandra* occurring even after twelve weeks; the experiment is being continued. Experiments were started using an insecticide in a whitewash base.

*East African J. (1957) 23, 110-112.

129. *Losses in African Stores.*—Surveys were begun to assess the extent of loss in African stores, and the insects responsible for these losses; such information is fundamental to any attempt to introduce control measures. In north Uganda considerable loss is evident in stored sorghum and maize, the main insect involved being *Calandra oryzae*, with *Sitotroga cerealella* and *Cryptolestes spp.* locally important. Legumes suffer greatly from *Bruchids*. Simsim, finger millet and groundnuts in shell are not heavily attacked, but old simsim is subject to attack by *Tribolium*, *Oryzaephilus* and *Ephestia spp.*

(d) Perennial Crops (Coffee Research Unit)

(i) *Control of Couch Grass by "Dalapon"*

130. Trials were carried out at Kituza on 1/10 acre plots heavily infested with mature couch grass (*Digitaria scalarum*), at application rates of 5, 10, 15 and 20 lb./acre in 60 gallons of water. Although the foliage was destroyed, no satisfactory control of the rhizomes was obtained. A second series of trials was carried out, at similar rates of application, on couch which was regenerating after cultivation, i.e., 4–6 inches high and growing rapidly. Eight weeks after treatment, it was evident that a large measure of control had been obtained by applications of 10 lb./acre and above. The ground cover had changed from predominantly couch to soft weeds such as *Galinsoga parviflora* and *Bidens pilosa*. A third series on a different site showed a similar degree of control, this time at 5 lb./acre. Some slight damage to the trees was observed in the second series, where application was made before a very dry spell; there was no effect on the coffee in the third series where application was made during showery weather. The cost of this treatment (5 lb./acre) was about Shs. 200/- per acre, compared with hand clearing at Shs. 600/- per acre, and experience has shown that hand clearing even when well supervised does not eradicate this weed.

(ii) *Investigations on compatibility in Robusta Coffee*

131. Controlled pollinations made during 1957 gave an average set of 57% for out-pollinations and 25% for selfs. It is evident that the setting on selfing was higher than would be expected from plants with a large measure of self-incompatibility. Out-pollinations on the same population of trees on which the selfings were carried out have shown no evidence of cross-incompatibility, so far. The receptacle of flowers which were self-pollinated persisted for a considerable time, although it was obvious that many of them had not been fertilised. The rate of drop of berries from selfed flowers was followed for a period of 200 days to establish at what time it was safe to regard an ovary as fertilised. It was found that there was a high rate of drop for the first 100 days, and very little drop beyond that point. Microscopical examination of a large number of styles from flowers which had been self-pollinated, showed that growth of the pollen tube from the stigmatic tissue was very limited. None reached the ovary. Thus the situation stands at the moment that workers in India, the Belgian Congo and French West Africa have found a very high degree

of self-incompatibility in their populations of Robusta coffee, whilst Uganda workers have obtained results somewhat at variance with this.

(iii) *Arabica Coffee Variety Trials*

132. Record sheets for the Bugisu trials showed that at medium and low altitudes the Kenya selection K.7 had the greatest Hemileia rust resistance, and retained its canopy better than any of the other selections. There was no difference at high altitudes where the incidence of rust has always been low. The trials at Kawanda showed much die-back after last year's heavy crop. Analysis of the yield records showed that the Tanganyika varieties K.P.162, K.P.423, N.39 and C.40, and the Kenya variety K.7 were the highest yielders, and in one trial gave a crop equivalent to over seven tons of fresh cherry to the acre.

(iv) *Coffee Root Mealy Bug*

133. Specimens of mealy bugs found on roots of both Arabica and Robusta coffee from various parts of Buganda and Bugisu, and from the roots of a number of weed species from Bugisu, were identified at the Scott Laboratories, Kenya. Every specimen from coffee was *Pseudococcus latipes*; this species was not found on any of the weed plants, but is widespread throughout the coffee growing areas. It only causes severe and visible damage to plants of up to about seven years of age, on old plants it is often present, but causes no apparent damage. Thus old trees may well provide a reservoir of infection for new plantings. The subterranean habit of the pest makes survey difficult except where its presence is obvious on young plants. Field reports suggest that Root Mealy Bug outbreaks are found most commonly in friable well cultivated soil. The outbreak recorded* previously in Buganda was almost entirely suppressed eighteen months after the single application of "Agrocide 7" (= Benzene hexachloride containing 2.6% gamma isomer). Other outbreaks on Robusta coffee have been treated successfully. A series of trials was carried out in Bugisu, using a range of insecticides as both liquid and powder. "Agrocide 7" and 2.5% "Lindane" (pure BHC) dust, proved the most effective control with 2.5% and 1.5% "Aldrin" dust second. Because of the risk of tainted liquor with a crude BHC product, 2.5% "Lindane" dust has been advised as the standard control. Treatment of infested farms is now being carried out in Bugisu by the farmers themselves, with insecticide supplied by the Bugisu Coffee Board; not only is the pest controlled, but the recovery of the trees is sufficiently spectacular to impress the farmer with the efficacy of the treatment. A number of nursery beds of Arabica coffee, chiefly in Sebei, were infested. Treatment of beds before sowing, with "Agrocide 7" was effective in controlling further infestation. To avoid the distribution of infested seedlings a root dip of "Malathion" was recommended at time of sale, but only two societies out of the 71 carried this out. Liquoring tests on coffee from treated trees have been performed; the evidence for taint by crude BHC was inconclusive and there was none for "Lindane".

*Annual Report 1956, paragraph 182.

(v) *Biting Ants*

134. In Berry Borer control trials at Namalere it was found that 18.5% "Dieldrin" liquid concentrate at $\frac{1}{3}$ – $\frac{1}{2}$ pint to 4 gallons of water (about 0.2–0.3%) gave good control of biting ants. With low levels of infestation spot spraying of nests was sufficient; with higher levels it was necessary to spray the whole tree.

(vi) *Capsid—Lycidocoris Mimeticus*

135. A severe outbreak of capsid on Budai Estate, near Masaka, was controlled by 0.2% w/v DDT sprayed at the rate of one pint per tree. Damage was widespread in the Masaka area, but the incidence declined to negligible proportions later in the year.

(e) *Farming*

(i) *Pastures*

136. The number of grasses suitable for pastures under Serere conditions has been narrowed down to three species and suitable legumes to four species. The grasses are *Panicum Maximum*, *Hyparrhenia rufa* and *Chloris gayana* (SR.5316); the legumes *Pueraria phaseoloides*, *Calopogonium sp.*, *Desmodium uncinatum* and *Stylosanthes gracilis*. The first two species of grasses yielded over ten tons per acre per annum of green matter over a period of three years. In a formal trial of grass and grass legume mixtures, the inclusion of *Stylosanthes gracilis* in a *Panicum maximum* sward led to a mean increase of 23% in the total yield of green matter, with a slight increase in actual grass yield.

(ii) *Livestock*

137. At Serere the herd of 408 Bukedi cattle has been maintained in order to select for better beef and to afford a level of milk production adequate for good calves, and to supply the needs of the farmer. Progeny testing of selected bulls is being carried out and the herd has been opened to introduce a wider range of breeding stock from Teso District. On the semi-range system of once-a-day milking, the average yield of 120 gallons per lactation is only 10 gallons in excess of the desired culling level. Although a small supplementary ration of concentrates has failed to increase milk yields, examination of live-weight records and experience during droughts has emphasised the desirability of improving the pastures and their management.

138. At Kawanda the Nganda herd was culled from 181 to 155 head. The semi-range system of management was introduced and a marked improvement in appearance and milk yield was noticeable within two months.

(iii) *Farming Systems*

139. The study of the farming systems practised in Uganda is continuing. This work is complementary to the soil and vegetation surveys

and all three projects have the common aim of giving farmers the benefits of scientific planning for sustained high productivity.

VII. STAFF

140. The establishment of Field Officers in the Department was increased in 1957 to assist with the campaign to raise agricultural productivity. New appointments during the year included three agricultural officers, five field officers and two assistant agricultural officers. In addition two field officers were recruited for duties in connection with the multiplication of pedigree cotton seed. A soil chemist and a taxonomic botanist were appointed to the Research Division, whilst a plant pathologist and an agronomist began courses of training prior to joining the division in 1958. During the last quarter the post of Senior Botanist, which had been vacant for $2\frac{1}{2}$ years, was filled.

141. In February, Mr. J. F. Low, Principal Field Officer, left Uganda on retirement after eighteen years' service. Mr. Low will be long remembered for his services to agricultural education, in training departmental staff and conducting courses for chiefs, farmers and others. Latterly he played an important part in establishing the Arapai Farm Institute. Mr. Low was honoured by H.M. the Queen, who was graciously pleased to confer on him the award of M.B.E., in the New Year Honours 1958, for his outstanding service. The Department also lost, through retirement, the services of Mr. Y. M. Kaidzi, Assistant Agricultural Officer, who was the first agricultural diplomate to be appointed from Makerere College. Mr. Kaidzi had served the Department loyally and well since 1927.

VIII. ACKNOWLEDGMENTS

142. It is with pleasure that I record my thanks to all those who have so readily given assistance to this Department, officials, and non-officials alike. In particular I would like to thank members of the Cotton and Coffee Advisory Committees and the Minister of Natural Resources and his staff. Finally, I would like to thank all members of the Department for their hard work and loyal support; a special word of thanks is due to members of the Field Division for their magnificent contribution to the drive for increasing agricultural productivity.

ENTEBBE,

31ST MARCH, 1958.

J. G. M. KING,
Director of Agriculture.

UGANDA RAINFALL, 1957

Station	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
ARUA	Total : ins...	3.54	0.21	7.58	6.98	12.34	6.30	4.20	6.10	5.97	4.21	0.98	62.76
	Days	8	1	10	13	16	11	14	9	13	12	7	123
	Mean : ins...	0.76	1.86	3.35	5.52	5.08	6.05	7.49	6.61	7.11	3.98	1.65	55.25
GULU	Total : ins...	1.75	0.21	4.25	11.54	4.09	4.74	5.66	5.02	6.29	4.79	1.31	57.81
	Days	8	4	17	20	13	13	18	12.81	14	12	4	149
	Mean : ins...	0.47	1.68	3.34	6.92	5.71	6.38	8.90	5.02	6.42	3.70	1.78	60.21
LIRA	Total : ins...	1.59	0.91	1.88	8.01	2.92	4.48	6.68	3.73	2.29	3.65	1.70	47.90
	Days	7	5	9	14	15	12	13	8	12	7	4	113
	Mean : ins...	1.04	1.39	3.34	6.78	5.12	5.14	8.69	6.40	5.56	3.03	1.61	55.41
MOROTO	Total : ins...	0.97	—	6.73	3.62	2.00	0.52	2.43	0.14	1.60	1.47	2.64	28.70
	Days	4	—	7	12	3	4	6	1	1	4	3	N.A.
	Mean : ins...	0.30	1.21	2.59	4.99	3.41	5.46	4.39	2.11	1.84	1.73	0.91	34.83
SERERE	Total : ins...	1.42	2.32	4.13	10.38	5.98	3.17	6.10	1.54	3.61	3.33	2.13	51.36
	Days	5	2	11	21	11	15	19	9	8	12	7	142
	Mean : ins...	0.85	2.15	3.59	8.26	4.17	4.64	6.49	5.54	4.39	3.48	2.11	53.23
TORORO	Total : ins...	3.71	0.37	6.02	11.84	3.76	2.42	3.89	1.83	4.86	4.77	4.56	56.23
	Days	12	4	14	21	15	12	13	10	12	12	16	158.19
	Mean : ins...	1.96	2.59	5.14	8.62	4.16	4.08	4.69	3.89	4.60	3.83	2.89	55.19
JINJA	Total : ins...	4.55	1.33	2.94	6.87	1.73	2.61	2.59	0.43	3.18	4.10	1.65	40.62
	Days	11	6	20	22	11	8	10	4	13	11	12	147
	Mean : ins...	3.91	1.61	3.53	7.85	2.18	2.05	4.30	2.67	3.24	3.25	4.00	45.07

KASALE ..	Total : ins...	3-39	3-11	5-07	8-51	7-18	2-31	1-08	1-12	0-56	1-78	3-72	4-46	43-19
	Days	13	15	18	24	21	8	4	4	10	17	21	18	173
	Mean : ins...	2-29	3-56	4-65	5-39	3-76	1-09	0-86	2-09	3-78	4-82	4-08	3-42	38-79
MBARARA ..	Total : ins...	3-83	1-26	4-36	7-60	8-80	2-72	1-57	1-53	1-86	2-94	1-98	6-45	44-90
	Days	12	6	13	18	22	7	3	2	7	12	14	18	134
	Mean : ins...	1-59	2-41	3-81	4-80	3-16	1-03	0-87	2-50	3-91	4-06	4-47	2-95	35-56
FORT PORTAL	Total : ins...	1-98	0-92	6-38	10-33	3-93	4-15	1-87	3-07	3-71	9-64	5-47	5-99	57-44
	Days	9	5	22	26	20	12	6	15	18	22	20	15	190
	Mean : ins...	1-31	2-87	5-34	7-33	5-60	3-25	2-32	4-61	7-44	8-41	6-35	3-01	57-84
BULINDI ..	Total : ins...	2-63	2-26	3-58	5-49	3-09	2-60	1-16	5-78	4-48	4-56	2-77	1-79	40-19
	Days	7	6	10	19	11	9	3	7	11	18	13	12	126
	Mean : ins...	1-34	2-40	4-16	7-13	5-27	3-60	3-53	5-75	6-43	4-92	3-67	2-17	50-37
MASAKA ..	Total : ins...	3-66	1-72	6-74	9-33	6-64	1-72	—	1-41	0-25	7-87	3-31	7-76	50-41
	Days	12	6	13	15	14	6	—	6	3	12	12	15	111
	Mean : ins...	2-04	2-40	4-43	7-03	6-72	1-74	1-38	2-12	3-45	3-88	3-75	3-50	42-44
KAKUMIRO ..	Total : ins...	0-66	1-05	2-47	8-48	5-88	2-31	3-71	3-80	2-96	5-95	6-23	3-48	46-98
	Days	6	5	9	20	19	7	4	9	7	14	15	8	123
	Mean : ins...	1-42	2-32	4-48	6-57	4-10	2-84	2-86	5-41	6-84	7-14	5-35	2-77	52-10
MITYANA ..	Total : ins...	3-10	0-74	6-55	7-89	7-93	2-16	3-89	3-23	2-28	4-62	7-54	2-88	52-81
	Days	9	3	16	20	20	12	5	12	7	11	20	7	142
	Mean : ins...	2-01	2-51	4-46	6-39	4-70	2-28	1-80	3-92	4-44	5-69	4-41	3-12	45-73
KAMPALA ..	Total : ins...	3-88	2-54	8-02	10-48	8-27	1-63	3-31	1-17	1-11	2-42	3-67	5-44	51-94
	Days	10	8	15	20	16	9	6	7	4	11	11	17	134
	Mean : ins...	3-81	1-57	5-09	9-83	5-37	1-04	1-95	2-80	1-98	3-07	4-68	4-68	45-87
ENTEBE ..	Total : ins...	3-96	1-94	7-68	12-65	9-44	5-52	3-09	2-28	0-31	4-52	8-94	4-55	64-88
	Days	11	8	17	24	23	12	8	5	1	14	14	17	154
	Mean : ins...	4-28	3-31	6-11	11-18	10-56	3-64	2-59	3-60	3-12	3-55	5-60	5-13	62-67

COTTON PRODUCTION, 1956/57 SEASON

Province and Zone	Acreages		Sales in Tons (Seed Cotton)		Yields per Acre (Seed Cotton)	
	Totals	Means	Totals	Means	Totals	Means
	1956/57	1951/52- 1955/56	1956/57	1951/52- 1955/56	1956/57	1951/52- 1955/56
BUGANDA—					lb.	lb.
Mengo	260,449	304,177	53,897	53,012	464	390
Masaka	27,893	32,284	4,189	4,680	336	325
Mubende	57,656	55,882	9,613	9,638	373	386
TOTALS ..	345,998	392,343	67,699	67,330	438	384
WESTERN—						
Bunyoro	26,009	28,482	4,779	4,664	412	367
Toro	26,684	28,562	4,785	2,738	402	215
TOTALS ..	52,693	57,044	9,564	7,402	407	291
EASTERN—						
Busoga	364,092	325,748	62,551	48,336	385	332
Mbale	313,542	330,288	28,475	32,791	203	222
South Teso ..	54,969	63,056	6,159	5,495	251	195
South Teso Segregated	38,227	35,753	5,129	4,542	301	285
North Teso ..	68,594	52,402	5,398	4,898	176	209
Usuku	16,428	15,159	1,708	2,040	233	301
TOTALS ..	855,852*	822,406	109,420†	98,102	286	267
NORTHERN—						
Lango	144,372	171,675	15,204	17,004	236	222
East Acholi and Kara- moja	53,644	44,157	5,021	5,160	211	262
West Acholi ..	40,665	36,372	5,072	5,967	279	368
West Nile	75,315	60,450	6,982	6,978	208	258
TOTALS ..	313,996*	312,654	32,279†	35,109	230	252
PROTECTORATE TOTALS ..	1,568,539	1,584,447	218,962	207,943	313	294

* These figures do not agree with provincial totals as shown in Tables III (a), III (c) and III (e) due to the fact that the boundaries of the zones listed under Eastern and Northern Provinces do not coincide with provincial boundaries. The difference is compensating and the Protectorate totals in Tables II (a) and III (a) agree.

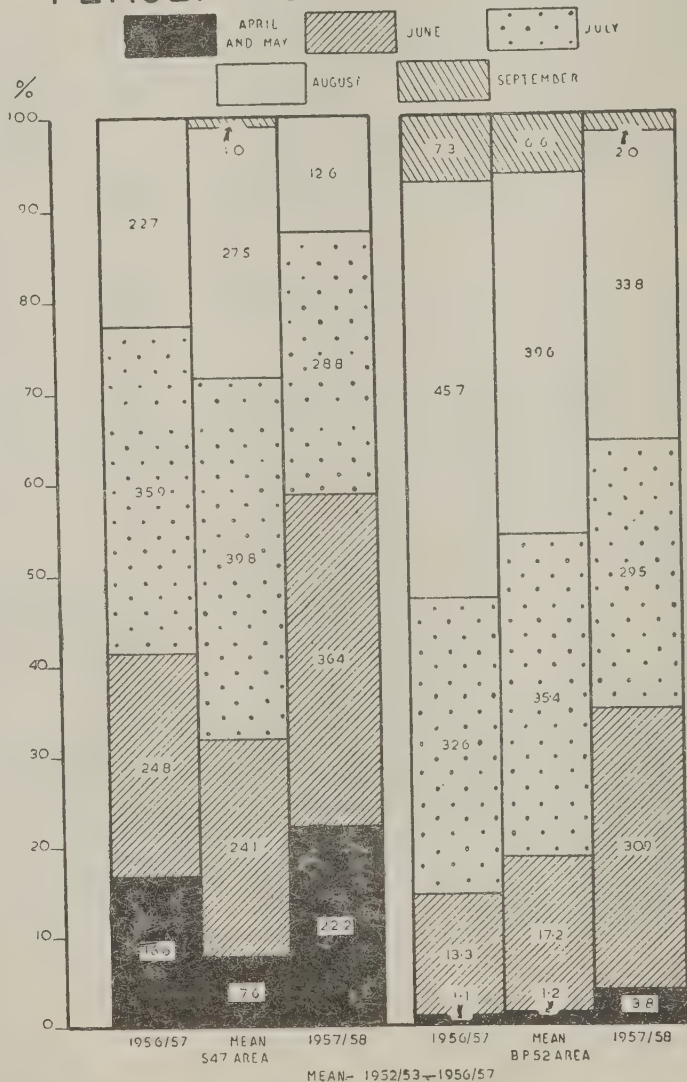
† Similarly these figures do not agree with those in Table IV ; the Protectorate totals, however, agree.

COTTON PRODUCTION, 1957/58 SEASON
(Monthly Plantings—Acres)

Province/Zone	April	May	June	July	Aug.	Sept.	TOTAL
BUGANDA—							
Mengo ..	—	5,465	92,016	87,502	58,525	979	244,487
Masaka ..	—	6,158	14,717	7,348	5,800	1,664	35,687
Mubende ..	—	1,707	13,672	18,228	33,394	1,108	68,109
TOTAL ..	—	13,330	120,405	113,078	97,719	3,751	348,283
WESTERN—							
Bunyoro ..	—	2,834	11,034	11,805	17,897	—	43,570
Toro ..	—	—	5	573	28,531	4,991	34,100
TOTAL ..	—	2,834	11,039	12,378	46,428	4,991	77,670
EASTERN—							
Busoga ..	919	94,300	111,977	92,088	40,687	—	339,971
Mbale ..	5,954	57,105	111,662	103,580	44,924	—	323,225
South Teso ..	4,590	21,388	18,440	6,408	2,505	—	53,331
South Teso Segre-							
gated ..	2,762	13,914	14,395	8,377	3,802	—	43,250
North Teso ..	1,705	17,348	25,433	12,355	3,554	—	60,395
Usuku ..	231	9,173	7,900	1,101	36	—	18,441
TOTAL ..	16,161	213,228	289,807	223,909	95,508	—	838,613*
NORTHERN—							
Lango ..	1,219	21,397	83,412	59,103	28,019	—	193,150
East Acholi and							
Karamoja ..	80	8,951	23,841	19,539	7,517	—	59,928
West Acholi ..	—	3,104	23,364	16,168	3,786	—	46,422
West Nile ..	—	439	12,788	24,724	14,996	—	52,947
TOTAL ..	1,299	33,891	143,405	119,534	54,318	—	352,447*
PROTECTORATE							
TOTALS ..	17,460	263,283	564,656	468,899	293,973	8,742	1,617,013

* These figures do not agree with those in Tables III (a) and III (e) due to the fact that the boundaries of the zones listed under Eastern and Northern Provinces do not coincide with the provincial boundaries. The differences are compensating : the Protectorate totals agree.

COTTON MONTHLY PLANTINGS AS PERCENTAGES OF TOTAL



COTTON MONTHLY PLANTINGS AS PERCENTAGES OF TOTAL

PROVINCE/ZONE	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	1957/58	Mean 1952/53- 1956/57	1957/58	Mean 1952/53- 1956/57	1957/58	Mean 1952/53- 1956/57	1957/58	Mean 1952/53- 1956/57	1957/58	Mean 1952/53- 1956/57	1957/58	Mean 1952/53- 1956/57
<i>Buganda</i> —												
Mengo ..	—	—	2.2	0.5	37.7	18.3	35.8	38.9	23.9	39.0	0.4	3.3
Masaka ..	—	—	17.3	6.2	41.2	18.8	20.6	16.3	16.3	33.4	4.6	25.3
Mubende ..	—	—	2.5	2.1	20.1	18.4	26.8	32.8	49.0	40.8	1.6	5.9
PROVINCIAL AVERAGE ..	—	—	3.8	1.2	34.6	18.4	32.5	36.2	28.0	38.8	1.1	5.4
<i>Western</i> —												
Bunyoro ..	—	—	6.5	2.7	25.3	18.8	27.1	48.5	41.1	28.1	—	1.8
Toro ..	—	—	—	—	—	0.1	1.7	11.8	83.7	62.2	14.6	25.9
PROVINCIAL AVERAGE ..	—	—	3.6	1.3	14.3	9.3	15.9	29.8	59.8	45.5	6.4	14.1
<i>Eastern</i> —												
Busoga ..	0.3	—	27.7	7.3	32.9	24.1	27.1	38.4	12.0	28.4	—	1.8
Mbale ..	1.8	0.1	17.7	5.2	34.5	23.1	32.1	41.3	13.9	29.6	—	0.7
South Teso ..	8.6	1.0	40.1	17.4	34.6	31.5	12.0	30.5	4.7	19.1	—	0.5
South Teso Segregated ..	6.4	0.9	32.2	14.5	33.3	28.9	19.3	27.5	8.8	27.6	—	0.6
North Teso ..	2.8	0.6	28.7	18.1	42.1	32.3	20.5	32.7	5.9	16.3	—	—
Usuku ..	1.3	5.4	49.7	53.7	42.8	28.6	6.0	11.6	0.2	0.7	—	—
PROVINCIAL AVERAGE ..	1.9	0.3	25.4	9.1	34.6	25.1	26.7	37.6	11.4	26.8	—	1.1
<i>Northern</i> —												
Lango ..	0.6	0.4	11.1	2.8	43.2	22.1	30.6	45.7	14.5	28.1	—	0.9
East Acholi and Karamoja ..	0.1	—	14.9	5.9	39.8	24.3	32.7	47.0	12.5	22.2	—	0.6
West Acholi ..	—	—	6.7	1.1	50.3	19.8	34.8	49.6	8.2	28.2	—	1.3
West Nile ..	—	—	0.8	0.1	24.2	18.8	46.7	43.2	28.3	37.2	—	0.7
PROVINCIAL AVERAGE ..	0.4	0.2	9.6	2.5	40.7	21.5	33.9	45.8	15.4	29.1	—	0.9
PROTECTORATE AVERAGE ..	1.1	0.2	16.3	5.6	34.9	22.2	29.0	38.6	18.2	30.9	0.5	2.5

COTTON PRODUCTION

(Number of Bales of 400 lb., 1907-1957)

(Note: All figures are corrected to 1,000 bales)

Season	Bales (Actual)	Bales (5 year average)	Season	Bales (Actual)	Bales (5 year average)
1907	2,000	—	1932-33 ..	295,000	246,000
1908	4,000	—	1933-34 ..	286,000	271,000
1909	5,000	9,000	1934-35 ..	253,000	296,000
1910	12,000	13,000	1935-36 ..	316,000	321,000
1911	20,000	21,000	1936-37 ..	332,000	325,000
1912-13 ..	26,000	25,000	1937-38 ..	418,000	335,000
1913-14 ..	40,000	27,000	1938-39 ..	307,000	344,000
1914-15 ..	26,000	28,000	1939-40 ..	300,000	326,000
1915-16 ..	22,000	29,000	1940-41 ..	365,000	264,000
1916-17 ..	28,000	26,000	1941-42 ..	238,000	241,000
1917-18 ..	27,000	30,000	1942-43 ..	112,000	236,000
1918-19 ..	36,000	44,000	1943-44 ..	191,000	208,000
1919-20 ..	47,000	48,000	1944-45 ..	272,000	207,000
1920-21 ..	81,000	60,000	1945-46 ..	227,000	218,000
1921-22 ..	48,000	78,000	1946-47 ..	231,000	258,000
1922-23 ..	88,000	108,000	1947-48 ..	170,000	272,000
1923-24 ..	128,000	128,000	1948-49 ..	391,000	295,000
1924-25 ..	196,000	145,000	1949-50 ..	339,000	325,000
1925-26 ..	180,000	155,000	1950-51 ..	346,000	355,000
1926-27 ..	131,000	170,000	1951-52 ..	380,000	357,000
1927-28 ..	138,000	156,000	1952-53 ..	320,000	349,000
1928-29 ..	204,000	157,000	1953-54 ..	398,000	352,000
1929-30 ..	125,000	173,000	1954-55 ..	300,000	351,000
1930-31 ..	189,000	204,000	1955-56 ..	364,000	—
1931-32 ..	207,000	220,000	1956-57 ..	372,000	—

CROP PRODUCTION Estimated Acreages under Crops, 1956 and 1957—African Cultivation

CROP	BUGANDA		EASTERN		NORTHERN		WESTERN		TOTAL	
	1956	1957	1956	1957	1956	1957	1956	1957	1956	1957
Bambara Nuts	—	—	503	427	—	—	32	—	535	427
Beans, Mixed	201,633	128,549	185,102	147,468	151,341	113,271	119,006	119,206	657,082	508,894
Beans, Soya	1,737	268	—	—	—	—	3,032	943	4,769	1,211
Cassava	46,261	46,154	207,365	215,040	182,902	161,168	106,365	106,070	542,893	528,432
Chillies	—	—	—	—	—	—	32	22	32	22
Coffee, Arabica	2,207	1,007	19,624	19,950	563	835	5,189	6,987	27,583	28,779
Coffee, Robusta	315,379	384,663	1,358	6,779	66	101	10,901	11,282	327,704	402,825
Cotton	345,998	348,283	892,434	875,126	277,414	315,934	52,693	77,670	1,568,539	1,617,013
Gram	2,784	7,142	1,375	2,224	2,392	303	3	17	6,554	9,686
Groundnuts	91,535	87,468	214,985	216,884	85,844	79,831	20,793	26,354	413,157	410,537
Maize	211,487	138,781	142,132	123,238	65,731	46,758	58,178	49,467	477,528	358,244
Millet, Sorghum	61,715	52,804	169,080	139,034	190,840	318,896	171,090	173,212	592,725	683,946
Millet, Finger	24,645	27,102	723,852	729,641	279,024	272,246	150,489	123,256	1,178,010	1,152,245
Millet, Bulrush	—	—	1,605	747	2,958	3,943	—	—	4,563	4,690
Onions	—	—	—	—	—	—	4,470	3,538	4,470	3,538
Peas, Pigeon	—	—	1,807	1,565	164,029	155,777	667	387	166,503	157,729
Peas, Field	—	—	—	—	—	—	38,115	30,059	38,115	30,059
Plantains	442,044	463,699	439,049	439,589	6,559	17,372	367,760	378,611	1,255,412	1,299,271
Potatoes, Sweet	108,016	109,234	169,548	163,053	97,071	77,202	194,814	179,819	569,449	529,308
Potatoes, Solanum	—	270	2,722	1,873	—	—	8,968	12,368	11,690	14,511
Rice	—	—	649	684	1,370	1,311	93	44	2,112	2,039
Simsim	—	3,162	24,519	27,470	220,209	193,474	4,181	3,571	253,081	227,677
Sunflower	4,172	—	—	—	500	16	—	9	500	25
Sunn-Hemp	—	—	329	108	—	—	—	—	329	108
Tobacco, Fire-cured	—	—	—	—	2,529	3,229	372	543	2,901	3,772
Tobacco, Air-cured	1,031	931	9	9	—	—	3,751	5,044	4,791	5,984
Wheat	585	440	—	—	1,268	1,078	278	—	2,131	1,518
Yams	—	—	499	13	—	—	388	380	887	393
Yams	—	—	31	233	—	—	—	—	31	233
TOTAL	1,861,229	1,799,957	3,198,577	3,111,155	1,732,610	1,762,745	1,321,660	1,308,859	8,114,076	7,982,716

CROP PRODUCTION
Estimated Acreages under Crops, 1956 and 1957—African Cultivation
BUGANDA PROVINCE

CROP	MENO		MASAKA		MUBENDE		TOTAL	
	1956	1957	1956	1957	1956	1957	1956	1957
Beans, Mixed ..	115,485	77,386	68,486	33,462	17,662	17,701	201,633	128,549
Beans, Soya ..	1,737	268	—	—	—	—	1,737	268
Cassava ..	33,020	32,507	7,268	5,427	5,973	8,220	46,261	46,154
Coffee, Arabica ..	1,200	—	1,007	1,007	—	—	2,207	1,007
Coffee, Robusta ..	234,630	295,516	72,954	80,042	7,795	9,105	315,379	384,663
Cotton ..	292,255	291,733	27,893	35,687	25,850	20,863	345,998	348,283
Gram ..	1,055	1,322	835	3,667	894	2,153	2,784	7,142
Groundnuts ..	66,372	61,520	15,893	17,483	9,270	8,465	91,535	87,468
Maize ..	184,088	111,818	23,752	20,772	3,647	6,191	211,487	138,781
Millet, Sorghum ..	35,175	30,329	20,481	15,750	6,059	6,725	61,715	52,804
Millet, Finger ..	16,437	18,037	2,048	2,720	6,160	6,345	24,645	27,102
Plantains ..	272,075	296,749	149,189	142,090	20,780	24,860	442,044	463,699
Potatoes, Sweet ..	79,868	87,164	16,071	12,127	12,077	9,943	108,016	109,234
Potatoes, Solanum ..	—	270	—	—	—	—	—	270
Simsim ..	2,809	2,248	—	—	1,363	914	4,172	3,162
Tobacco, Fire-cured ..	—	—	—	—	1,031	931	1,031	931
Tobacco, Air-cured ..	—	—	—	—	585	440	585	440
TOTAL ..	1,336,206	1,306,867	405,877	370,234	119,146	122,856	1,861,229	1,799,957

CROP PRODUCTION

Estimated Acreages under Crops, 1956 and 1957—African Cultivation

EASTERN PROVINCE

CROPS	BUSOGA		BUKEDI		BUGISU		TESO		TOTAL	
	1956	1957	1956	1957	1956	1957	1956	1957	1956	1957
Bambara Nuts	—	—	—	—	—	—	503	427	503	427
Beans, Mixed	13,785	25,444	56,741	42,181	17,865	22,655	96,711	57,188	185,102	147,468
Cassava	46,751	44,094	57,791	56,121	16,485	17,843	86,338	96,982	207,365	215,040
Coffee, Arabica	—	—	—	—	19,623	19,947	1	3	19,624	19,950
Coffee, Robusta	1,358	6,779	—	—	—	—	—	—	1,358	6,779
Cotton	364,092	339,971	201,771	207,212	49,765	64,034	276,806	263,909	892,434	875,126
Gram	—	—	—	—	—	—	1,375	2,224	1,375	2,224
Groundnuts	60,440	67,225	49,988	46,473	9,831	9,296	94,726	93,890	214,985	216,884
Maize	74,335	54,278	23,339	22,195	38,576	37,899	5,882	8,866	142,132	123,238
Millet, Sorghum	1,257	1,010	25,471	18,111	8,712	8,647	133,640	111,266	169,080	139,034
Millet, Finger	139,549	155,410	211,608	184,652	60,164	60,595	312,531	328,984	723,852	729,641
Millet, Bulrush	—	—	—	—	—	—	1,605	747	1,605	747
Peas, Pigeon	—	—	51,600	52,000	—	—	1,807	1,565	1,807	1,565
Plantains	184,746	184,886	33,709	26,238	200,000	200,000	2,703	2,703	439,049	439,589
Potatoes, Sweet	61,838	71,185	—	—	14,998	12,812	59,003	52,818	169,548	163,053
Potatoes, Solanum	—	—	—	—	2,722	1,873	—	—	2,722	1,873
Rice	6	29	56	391	8	—	579	264	649	684
Simsim	1,302	1,667	651	825	73	48	22,493	24,930	24,519	27,470
Sunn-Hemp	—	—	—	—	—	—	329	108	329	108
Tobacco	—	—	—	—	—	—	9	9	9	9
Wheat	—	—	—	—	—	—	—	—	499	13
Yams	—	—	—	—	—	—	—	—	31	233
TOTAL	949,459	951,978	712,725	656,399	439,321	455,662	1,097,072	1,047,116	3,198,577	3,111,155

CROP PRODUCTION

Estimated Acres under Crops, 1956 and 1957—African Cultivation
WESTERN PROVINCE

CROP	ANKOLE		BUNYORO		KIGEZI		TORO		TOTAL	
	1956	1957	1956	1957	1956	1957	1956	1957	1956	1957
Bambara Nuts	32	—	—	—	—	—	30,535	32,639	32	—
Beans, Mixed	22,474	21,312	9,316	8,635	56,681	56,620	—	—	119,006	119,206
Beans, Soya	3,000	893	5	—	—	—	27	50	3,032	943
Cassava	10,500	8,727	31,051	42,336	2,887	3,081	61,927	51,926	106,365	106,070
Chillies	—	—	—	—	11	11	21	11	32	22
Coffee, Arabica	2,647	2,515	—	—	317	338	2,225	4,134	5,189	6,987
Coffee, Robusta	6,659	5,388	1,053	1,165	421	443	2,768	4,286	10,901	11,282
Cotton	—	—	26,009	43,570	—	—	26,684	34,100	52,693	77,670
Gram	—	—	—	—	—	—	3	17	3	17
Groundnuts	9,600	7,898	2,526	6,384	3,124	4,714	5,543	7,358	20,793	26,354
Maize	5,000	4,343	4,746	5,981	28,514	26,487	19,918	12,656	58,178	49,467
Millet, Sorghum	16,874	14,658	456	946	147,434	152,954	6,326	4,654	171,090	173,212
Millet, Finger	41,667	16,247	13,992	16,257	74,499	67,308	20,331	23,444	150,489	123,256
Onions	882	821	94	342	3,171	2,267	323	108	4,470	3,538
Peas, Field	8,624	6,698	—	—	29,264	23,313	227	48	38,115	30,059
Peas, Pigcon	—	—	270	387	—	—	397	—	667	387
Plantains	264,983	272,643	19,202	19,409	67,497	72,664	16,078	13,895	367,760	378,611
Potatoes, Sweet	33,696	28,996	25,601	13,137	117,542	123,686	17,975	14,000	194,814	179,819
Potatoes, Solanum	83	77	3	20	8,623	11,900	259	371	8,968	12,368
Rice	—	—	4,093	3,561	—	—	93	43	93	44
Simsim	6	2	—	—	—	—	82	8	4,181	3,571
Sunflower	—	—	—	—	—	—	—	—	—	9
Tobacco, Air-cured	—	—	—	—	278	—	—	—	278	—
Tobacco, Fire-cured	—	—	3,751	5,044	—	543	—	—	3,751	5,044
Tobacco, Flue-cured	—	—	—	—	372	271	—	—	372	543
Wheat	—	—	—	—	250	—	138	109	388	380
TOTAL	426,727	391,218	142,168	167,174	540,885	546,610	211,880	203,857	1,321,660	1,308,859

CROP PRODUCTION
Estimated Acreages under Crops, 1956 and 1957—African Cultivation
NORTHERN PROVINCE

CROP	LANGO		ACHOLI		WEST NILE/MADI		KARAMOJA		TOTAL	
	1956	1957	1956	1957	1956	1957	1956	1957	1956	1957
Beans, Mixed	..	..	..	..	..	..	..	..	..	..
Cassava	48,973	28,858	32,676	9,489	69,692	74,924	—	—	151,341	113,271
Coffee, Arabica	52,761	43,952	30,503	31,596	99,538	85,465	100	155	182,902	161,168
Coffee, Robusta	—	—	—	—	563	835	—	—	563	835
Cotton	—	—	—	—	66	101	—	—	66	101
Gram	109,533	167,483	90,095	94,676	75,315	52,947	2,471	828	277,414	315,934
Groundnuts	28	—	—	—	2,364	303	—	—	2,392	303
Maize	28,014	35,055	28,010	23,065	28,020	19,879	1,800	1,832	85,844	79,831
Millet, Sorghum	5,859	4,949	1,941	3,025	55,831	32,980	2,100	5,804	65,731	46,758
Millet, Finger	78,759	150,764	52,838	47,588	22,243	19,356	37,000	101,188	190,840	318,896
Millet, Bulrush	133,190†	132,904†	73,834	68,935	69,200	66,690	2,800	3,717	279,024	272,246
Peas, Pigeon	—	—	558	413	—	—	2,400	3,530	2,958	3,943
Plantains	133,190†	132,904†	21,058	19,593	9,781	3,174	—	106	164,029	155,777
Potatoes, Sweet	467	691	—	8,682*	6,092	7,999	—	—	6,559	17,372
Rice	17,726	24,381	18,717	11,689	59,028	41,033	1,600	99	97,071	77,202
Simsim	591	478	—	210*	779	623	—	—	1,370	1,311
Sunflower	102,945	84,071	81,102	58,189	35,562	50,521	600	693	220,209	193,474
Tobacco, Air-cured	—	—	—	—	500	16	—	—	500	16
Tobacco, Flue-cured	—	—	—	—	1,268	1,078	—	—	1,268	1,078
	21	7	642	1,041	1,866	2,181	—	—	2,529	3,229
TOTAL	712,057	806,497	431,974	378,191	537,708	460,105	50,871	117,952	1,732,610	1,762,745

* Crop not previously included.

† Interplanted.

CROP PRODUCTION

Quantities Marketed and Estimated Values (African Production)

(Value Based on Prices Paid to Growers)

Province/District	Coffee Arabica		Coffee Robusta		Cotton		Tobacco Flue-cured (Cured Leaf)		Tobacco Flue-cured (Green Leaf)		Tobacco Air-cured (Cured Leaf)		Tobacco Fire-cured (Cured Leaf)		Total Value	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	1957	1956
	Tons	£	Tons	£	Tons	£	Tons	£	Tons	£	Tons	£	Tons	£	£	£
<i>Eastern—</i>																
Busoga ..	—	—	603† 2*	51,985	62,551	3,704,299	—	—	—	—	—	—	—	—	3,756,284	3,215,587
Bugisu ..	5,365%	1,434,823	—	—	4,519	264,924	—	—	—	—	—	—	—	—	1,699,747	1,626,964
Bukedi ..	—	—	—	—	18,324	1,074,231	—	—	—	—	—	—	—	—	1,074,231	1,268,926
Teso ..	—	—	—	—	26,132	1,536,422	—	—	—	—	—	—	—	—	1,536,422	1,273,646
TOTAL ..	5,365%	1,434,823	603† 2*	51,985	111,526	6,579,876	—	—	—	—	—	—	—	—	8,066,684	7,385,123
<i>Northern—</i>																
Lango ..	—	—	—	—	13,836	838,617	1	238	—	—	—	—	—	—	838,855	984,679
Acholi ..	—	—	—	—	9,186	549,316	23	6,306	1,130	12,768	—	—	—	—	568,390	797,112
Karamoja ..	—	—	—	—	169	10,418	—	—	—	—	—	—	—	—	10,418	4,777
West Nile/Madi ..	1† 8*	1,771	—	—	6,982	404,609	10	2,296	2,882	28,323	257	30,634	—	—	467,633	602,885
TOTAL ..	1† 8*	1,771	—	—	30,173	1,802,960	34	8,840	4,012	41,091	257	30,634	—	—	1,885,296	2,389,453
<i>Western—</i>																
Bunyoro ..	—	—	113†	9,680	4,779	277,885	—	—	—	—	—	—	1,180	143,383	430,948	400,711
Toro (1) ..	104*	23,583	887*	148,973	4,785	290,963	—	—	—	—	—	—	—	—	463,519	304,930
Kigezi ..	15*	3,401	36*	5,967	—	—	—	—	578	5,808	54	6,048	—	—	21,224	8,192
Ankole ..	193† 114*	47,745	1,391† 165*	147,157	—	—	—	—	—	—	—	—	—	—	194,902	37,619
TOTAL ..	193† 233*	74,729	1,504† 1,088*	311,777	9,564	568,848	—	—	578	5,808	54	6,048	1,180	143,383	1,110,593	751,452
<i>Buganda—</i>																
Mengo ..	243†	27,579	65,007† 42*	5,575,462	59,935	3,668,876	—	—	—	—	—	—	—	—	9,271,917	7,995,268
Masaka ..	—	—	34,476† 10*	2,971,076	4,189	252,856	—	—	—	—	—	—	—	—	3,223,932	3,166,251
Mubende ..	35† 13*	6,918	1,369†	117,269	3,575	207,703	—	—	—	—	112	13,288	275	33,114	378,292	412,257
TOTAL ..	278† 13*	34,497	100,852† 52*	8,663,807	67,699	4,129,435	—	—	—	—	112	13,288	275	33,114	12,874,141	11,573,776
PROTECTORATE TOTALS	—	1,545,820	102,959† 1,142*	9,027,569	218,962	13,081,119	34	8,840	4,590	46,899	423	49,970	1,455	176,497	23,936,714	22,099,804

% 5,175 tons parchment ; 190 tons buni. * Rough hulled. † Kiboko. (1) Includes 868 rough-hulled Robusta and 49 tons rough-hulled Arabica produced in Bwamba County.

NOTE.—Crops included in this table are those for which figures for quantities marketed and estimated values are known with accuracy. Crops such as maize, groundnuts, etc., of which considerable quantities are marketed are not included as reliable estimates of quantities or values are not available.

ARTICLE	UNIT	QUANTITIES			VALUE IN £		
		1955	1956	1957	1955	1956	1957
<i>Oilseeds and Products :</i>							
Cotton Seed ..	Tons ..	37	14,604	1,396	740	379,228	36,677
Castor Seed ..	Tons ..	3,348	1,844	1,757	132,694	105,251	113,941
Groundnuts ..	Tons ..	9,057	8,784	11,330	514,263	527,641	680,298
Linseed ..	Tons ..	55	—	—	2,742	—	—
Sesame Seed ..	Tons ..	80	86	484	6,186	5,755	33,517
Sunflower Seed ..	Tons ..	172	117	165	6,053	4,161	6,550
Cotton Seed Cake ..	Tons ..	47,770	58,635	52,293	1,359,519	1,537,379	1,229,178
Coconut Cake ..	Tons ..	60	—	—	1,400	—	—
Cotton Seed Oil ..	Tons ..	252	2,447	3,710	28,697	278,043	432,722
Groundnut Oil ..	Tons ..	11	76	534	1,234	9,326	66,683
Other Vegetable Oils ..	Tons ..	—	2	1	—	329	140
Other Oilseed Cake, Meals and other Vegetable Oil Residues ..	Tons ..	1,730	1,386	249	59,837	45,158	7,020
<i>Fibres :</i>							
Cotton, Raw ..	Tons ..	54,683	67,214	60,149	16,386,431	19,284,591	17,476,282
Sisal ..	Tons ..	619	634	361	35,282	39,902	19,854
Flax ..	Tons ..	34	34	—	3,758	2,868	—
<i>Beverage Crops and Tobacco :</i>							
Coffee, not roasted ..	Tons ..	74,442	61,646	84,029	20,134,103	15,720,611	21,586,756
Tea ..	Tons ..	2,255	2,403	2,734	1,062,486	891,460	1,080,908
Unmanufactured Tobacco ..	Tons ..	51	—	33	8,870	—	5,600
Cigarettes ..	Lb. ..	121,183	106,659	129,671	10,961	10,155	24,319
<i>Spices :</i>							
Chillies ..	Tons ..	203	200	244	56,375	48,264	44,063
Cinchona Bark ..	Tons ..	—	4	1	—	486	186
Papain ..	Tons ..	24	10	4	29,627	18,752	8,784
Vanilla ..	Tons ..	2	2	2	7,383	6,639	6,507
<i>Beans and Pulses :</i>							
Soya Beans ..	Tons ..	2,147	331	437	71,246	12,092	16,933
Others ..	Tons ..	632	112	105	17,980	4,977	4,610
<i>Cereals :</i>							
Maize ..	Tons ..	13,422	3,173	366	276,576	62,541	9,205
Millet ..	Tons ..	5	—	—	168	—	—
<i>Miscellaneous :</i>							
Rubber ..	Tons ..	35	23	—	7,789	5,859	—
Wattle Bark ..	Tons ..	—	50	—	—	1,000	—
Ethyl Alcohol ..	Gallons ..	11,556	7,342	80	3,920	2,670	40
Sugar ..	Tons ..	—	—	26	—	—	1,690
TOTAL				£	40,226,320	39,005,138	42,892,463

EXPORTS OF AGRICULTURAL PRODUCTS TO KENYA AND TANGANYIKA, 1957

ARTICLE	UNIT	QUANTITY			VALUE IN £		
		To Kenya	To Tanganyika	Total	To Kenya	To Tanganyika	Total
<i>Oilseed and Products :</i>							
Cotton Seed Cake	Tons ..	2,303	40	2,343	37,157	500	37,657
Other Oilseed Cakes, Meals and other Vegetable	Tons ..	1,177	—	1,177	31,402	—	31,402
Oil Residues	Tons ..	12	—	12	772	—	772
Sesame Seed	Tons ..	7	32	39	149	2,335	2,484
Groundnuts	Tons ..	3,313	1,746	5,059	344,018	189,087	533,105
Cotton Seed Oil	Tons ..	41	19	60	4,437	2,464	6,901
Other Vegetable Oils	Tons ..	—	—	—	—	—	—
<i>Fibres :</i>							
Cotton, Raw	Tons ..	244	—	244	54,844	—	54,844
<i>Beverage Crop and Tobacco :</i>							
Coffee, not roasted	Tons ..	204	46	250	64,470	17,343	81,813
Tea	Tons ..	2,523,224	—	2,523,224	357,813	—	357,813
Unmanufactured Tobacco	Lb. ..	1,926	833	2,759	1,929	872	2,801
Cigars, Cereots and Manufactured Tobacco	Tons ..	10	5	15	902	594	1,496
<i>Spices :</i>							
Chillies	Tons ..	1	—	1	39	—	39
<i>Beans and Pulses :</i>							
Soya Beans	Tons ..	1,652	1,377	3,029	44,633	30,369	75,002
Others	Tons ..	10	3,469	3,479	174	45,068	45,242
<i>Cereals :</i>							
Maize	Tons ..	20	715	735	666	19,582	20,248
Millet	Tons ..	60	—	60	13,822	—	13,822
<i>Miscellaneous :</i>							
Rubber	Tons ..	67,619	18,417	86,036	15,800	4,610	20,410
Ethyl Alcohol	Gallons	16,653	6,191	22,844	869,973	324,344	1,194,317
Sugar	Tons ..	—	—	—	—	—	—
				TOTAL	1,843,000	637,168	2,480,168

CROP PRODUCTION, UGANDA

Non-African Production, 1957

CROP	ESTIMATED ACREAGE		ESTIMATED PRODUCTION			
			Quantity		Value	
	1956	1957	1956	1957	1956	1957
Coffee (Robusta)	20,549	23,618	<i>Tons</i> 8,941	<i>Tons</i> 11,010	<i>£</i> 2,235,250	<i>£</i> 2,587,350
Coffee (Arabica)	3,580	3,103	1,259	857	389,980	282,810
Sugar	30,503	31,951	69,037	80,774	3,153,640	3,690,090
Tea	11,920	13,061	3,036	3,582	1,122,217	1,416,180
TOTAL ..	66,552	71,733	—	—	6,901,087	7,976,430

POPULATION AND AVAILABILITY OF LAND

Province/District	Total area <i>Sq. miles</i>	Area of land excluding open waters and reserved forests <i>Sq. miles</i>	Cultivated area <i>Acres</i>	Population*	Population density <i>Per sq. mile</i>	Cultivated land per head of population <i>Acres</i>	Estimated available land per head of population <i>Acres</i>	Ratio of available land to land cultivated
Buganda—								
Mengo	14,589	10,047	1,068,999	899,596	90	1.19	7.15	6.01
Masaka	8,122	3,969	320,791	317,688	80	1.01	8.00	7.92
Mubende	2,679	2,581	117,282	84,878	33	1.38	19.46	14.10
TOTAL	25,390	16,597	1,507,072	1,302,162	78	1.16	8.16	7.03
Eastern—								
Busoga	6,876	3,219	717,305	505,998	149	1.42	4.07	2.87
Bugisu and Mbale	1,597	1,166	381,754	266,559	229	1.43	2.80	1.96
Township	1,770	1,701	464,885	333,391	196	1.39	3.27	2.35
Bukedi	4,990	4,533	722,121	402,564	89	1.79	7.21	4.03
Teso								
TOTAL	15,233	10,619	2,286,065	1,508,512	140	1.52	4.51	2.97
Northern—								
Acholi	11,176	10,703	297,898	215,655	20	1.38	31.76	23.01
Lango	4,898	4,519	583,655	265,890	59	2.20	10.88	4.95
Karamoja	11,472	10,336	118,370	125,567	12	0.94	52.68	56.04
West Nile/Madi	6,061	5,294	488,314	336,036	63	1.45	10.08	6.95
TOTAL	33,607	30,852	1,488,237	943,175	31	1.58	20.93	13.25
Western—								
Bunyoro	6,011	4,198	159,938	108,380	26	1.48	24.79	16.75
Toro	5,380	4,319	200,289	258,873	60	0.77	10.68	13.87
Ankole	6,320	5,621	337,778	400,924	71	0.84	8.97	10.68
Kigezi	2,040	1,757	389,008	395,529	225	0.98	2.84	2.90
TOTAL	19,751	15,895	1,087,013	1,163,706	73	0.93	8.74	9.40
PROTECTORATE TOTAL	93,981	73,963	6,368,387	4,917,555	66	1.30	9.63	7.41

* 1948 Census figures.

PRINCIPAL AGRICULTURAL LEGISLATION

Subject	Ordinance Number	Legal Notice Number	Short Title	Objects
Coffee	2	—	Coffee Industry Ordinance, 1957 ..	(1) To safeguard and improve the quality of Uganda coffee ; (2) to ensure that coffee is processed and sold on the world market in such a way that the African farmer receives a maximum sustained return for his product ; and (3) to permit African farmers to process their own coffee.
		—	Coffee (Export Duty) (Amendment) Ordinance, 1957 ..	To remove the rebate from coffee export duty allowed to income tax payers and to change the rate of duty.
	14	99	Coffee Industry Ordinance, 1953 ..	Establishment of coffee markets and limitation of licences.
		120	Coffee Industry Ordinance, 1953 ..	To increase hullery processing quotas.
Cotton	16	—	Cotton Seed Export Duty (Repeal) Ordinance, 1957 ..	To repeal the Cotton Seed Export Duty Ordinance.
		21, 46, 246	Cotton Ordinance, 1952 ..	Establishment of cotton markets.
	—	124	Cotton Ordinance, 1952 ..	Fixation of maximum charges for ginning and baling.
		242	Cotton Ordinance, 1952 ..	Appointment of authorised officers.*
		256	Cotton Ordinance, 1952 ..	Declaration of segregated areas.
		121	Cotton Export Duty Ordinance ..	To reduce the export duty payable on ginned cotton.
Plant Protection	—	107	Plant Protection Ordinance ..	To control the importation of articles likely to spread <i>Trogoderma granarium</i> .
Tobacco	—	188, 189	Produce Marketing Ordinance, 1953	Declaration of buying seasons for tobacco leaf.

NOTE :—In addition to the above Protectorate Government legislation the Eishengyero of Ankole passed a land settlement bye-law to regulate the occupation of scheduled settlement areas.

DEPARTMENT OF AGRICULTURE—STAFF POSTINGS AS AT 31st DECEMBER, 1957

A. Administrative

Title	Name	Station	Remarks
<i>Director of Agriculture</i> ..	J. G. M. King, O.B.E.	Entebbe	
<i>Deputy Director of Agriculture</i> ..	J. T. Moon ..	Entebbe	
<i>Deputy Director of Agriculture</i> (Crop Industries) ..	D. R. N. Brown	Entebbe	
<i>Assistant Director of Agriculture</i> ..	G. D. Badger	Entebbe	
<i>Administrative Secretary</i> ..	E. B. Buckingham	Entebbe	
<i>Establishment Officer</i> ..	A. S. Bleasdale	Entebbe	
<i>Economic and Marketing Assistant</i> ..	T. Boothroyd	Entebbe	
<i>Bursars, Farm Institutes</i> ..	J. S. Duncan	Bukalasa	
	G. H. G. Stacey	Arapai	Arrived 23-8-57.
<i>Office Superintendents</i> ..	Lt. Col. D. Macdonald	Kawanda	
	J. E. de Souza	Entebbe	
	J. F. S. R. Lobo, M.B.E.	Entebbe	
<i>Senior Accounts Officer</i> ..	Miss M. Millward	Entebbe	
<i>Personal Secretaries, Grade II</i> ..	Miss C. Hoddy	Namalere	
	Miss M. L. Staples	Entebbe	
	Miss G. J. Ball	Entebbe	

B. Field Division

Title	Name	Station	Remarks
<i>Assistant Directors of Agriculture (Field)</i> ..	D. F. Stewart .. M.C.	Jinja ..	Provincial Agricultural Officer, Eastern Province.
<i>Chief Agricultural Development Officer</i> ..	Major W. H. Edwards ..	Kampala ..	Chief Agricultural Officer, Buganda.
<i>Principals, Major Farm Institutes</i> ..	A. D. Llewellyn-Jones ..	Namalere ..	
	O. S. Swainson ..	Bukalasa ..	
	J. M. Arthurs ..	Arapai ..	
<i>Senior Agricultural Officers and Agricultural Officers</i> ..	G. W. Anderson ..	Fort Portal ..	Provincial Agricultural Officer, Western Province.
	A. E. B. Williams ..	Gulu ..	Provincial Agricultural Officer, Northern Province.
	E. S. T. Marshall ..	Fort Portal ..	
	D. C. Todd ..	—	Proceeded on leave 19-12-57.
	R. G. Hampson, D.F.C. ..	Kampala ..	
	J. R. Low ..	Soroti ..	
	E. W. King ..	Kabale ..	
	R. B. Johnston ..	Moroto ..	
	R. J. Harvie ..	Mbarara ..	
	A. G. Ouseley-Smith ..	Arua ..	
	A. R. Dunbar ..	—	Proceeded on leave 23-10-57.
	C. R. Horrell ..	Serere ..	
	W. Hadlow ..	Gulu ..	Proceeded on leave 19-10-57.
	T. E. F. Weavind ..	—	
	R. E. H. Atkinson ..	Mpigi ..	
	A. D. R. Ker ..	Mbale ..	
	A. R. Humphreys ..	Masaka ..	
	K. M. L. Matthews ..	Lira ..	
	J. C. Phillips ..	Jinja ..	
	L. S. Todd ..	Soroti ..	
	A. S. Macdonald ..	Mukono ..	
	O. S. Barr ..	Arapai ..	
	J. B. Warren ..	Jinja ..	Arrived 15-8-57.
	T. H. Stobbs ..	Kawanda ..	Arrived 15-8-57.
	C. D. Watkins ..	Fort Portal ..	Arrived 15-8-57.
	G. S. Scott ..	Moroto ..	Arrived 10-10-57.
	D. J. Innes ..	Namalere ..	
	E. H. Jones ..	Entebbe ..	
	G. L. Kigundu ..	Bowa ..	
	H. R. Berunga, M.B.E. ..	Mubende ..	
<i>Agricultural Engineer</i> ..			
<i>Agricultural Officer (Economist)</i> ..			
<i>Agricultural Officers (Uganda)</i> ..			

B. Field Division—continued

Title	Name	Station	Remarks
<i>Senior Field Officers and Field Officers</i> ..			
	L. B. Ellis ..	Namalere	Proceeded on leave 19-12-57.
	G. A. Fennell ..	Kampala	Seconded to Bugisu Coffee Scheme.
	L. Green ..	Mbale	
	A. G. K. Will ..	Serere	
	A. L. Stephens, M.B.E.	Moroto	
	J. G. Wilson ..		
	J. L. McCumiskey ..	Mbale	Proceeded on leave 9-10-57.
	W. P. Beattie ..		Seconded to Bugisu Coffee Scheme.
	J. G. Smithson ..	Namalere	
	A. J. S. Armitage ..	Kigumba	
	H. D. C. Tarlton ..	Kabale	
	D. C. Collin ..	Kabale	
	Major T. F. Ellis ..	Kabale	
	W. A. Kneale ..	Bukalasa	
	M. F. Merchant ..	Gulu	
	J. H. Miller ..	Ngetta	
	V. V. Millet ..	Kituza	
	J. K. Mintowit-Czyz ..	Kigumba	
	J. R. Morton ..		Proceeded on leave 13-10-57.
	J. B. Mott ..		
	P. W. Taylor ..	Serere	
	J. Tilley ..	Lira	Proceeded on leave 20-9-57.
	J. M. Trathen ..		
	N. R. E. Travers ..	Kawanda	
	I. H. Woodruffe ..	Kabale	
	S. E. Mabey ..	Kabale	
	K. M. I. Popiel, M.B.E.	Kampala	
	G. Cullen-Snelling ..	Busoga	
	F. Bateman ..	Kitgum	
	J. R. Dorrell ..	Soroti	
	I. D. Hamilton ..	Mukono	Arrived 4-12-57.
	H. B. Miller ..	Kasese	Arrived 5-8-57.
	R. E. Oliver ..	Masaka	Arrived 22-10-57.
	C. P. E. Wadey ..	Mpigi	Arrived 22-10-57.
	J. D. Sorrie ..	Karamoja	
	R. C. Payne ..	Karamoja	
	Major C. M. Lamb ..	Karamoja	

C. Research Division

Title	Name	Station	Remarks
<i>Chief Research Officer</i>	J. D. Jameson, O.B.E.	Kawanda	
<i>Senior Entomologists and Entomologists</i>	J. S. Bowden	Kawanda	Arrived 24-8-57.
	W. R. Ingram	Serere	
	P. E. S. Whalley	Kawanda	
	J. C. Davies	Kawanda	
	D. N. McNutt	Kawanda	
<i>Senior Chemists and Chemists</i>	E. M. Chenery	Kawanda	
	J. R. Simpson	Kawanda	Arrived 5-8-57.
	B. Butters	Gulu	
<i>Soil Survey Officers</i>	C. D. Ollier	Masindi	
	J. F. Harrop	Kawanda	
	R. Radwanski	Serere	
<i>Senior Botanists and Botanists</i>	W. Hirst	Kawanda	
	B. J. T. Baldwin	Kawanda	
	I. Langdale-Brown	Kawanda	
	A. J. Pritchard	Kawanda	
<i>Senior Agronomists and Agronomists</i>	D. J. Parsons, M.C.	Kawanda	
	A. D. H. Joblin	Serere	
	W. R. Mills	Serere	
<i>Officer-in-Charge, Serere</i>	J. F. Archibald	Kawanda	
<i>Officer-in-Charge, Coffee Research Unit</i>	C. Sandison	Entebbe	
<i>Curator, Botanic Gardens</i>	E. W. Hughes	Kawanda	
<i>Laboratory Technologist</i>	Miss M. E. Griffiths	Kawanda	
<i>Taxonomist</i>	Miss P. M. Fiddes	Kawanda	Arrived 24-2-57.
<i>Librarian</i>	T. R. Jones	Kawanda	Arrived 31-10-57.
<i>Mechanics</i>	G. J. Webb	Serere	

D. Senior Assistant and Assistant Agricultural Officers

Name		Station	Name	Station	Name	Station
A. Kamyā	..	Bukalasa.	J. M. Sekimpi	..	R. A. Irigiei	Bukedi.
Z. H. Kwebiha	..	Seconded.	Y. E. Onaba	..	P. Menya	..
Z. K. Banagaija	..	Toro.	O. L. Lalobo	..	A. G. Kibulo	Busoga.
P. M. Sali	..	Mityana.	P. Sempa	..	H. D. Mubiru	Bugisu.
Z. K. Katerega	..	Entebbe.	Y. K. Musisi	..	S. K. Sengendo	Kawanda.
A. K. Mulera	..	Mityana.	S. M. B. Mutagwanya	..	E. B. Sarulo	U. K. Scholarship.
T. K. Otim	..	Seconded.	A. A. Kalanzi	..	F. H. O. M. Zake	..
Z. K. Sekidde	..	Busoga.	J. B. O. Baguma	..	M. S. K. Makumbi	Mpigi.
Y. K. Musitwa	..	Kampala.	H. G. N. Semambo	..	B. M. Kagolo	Bowa.
B. Z. K. Kakoko	..	Kigezi.	Y. B. Kizza	..	W. O. Lutara	..
J. M. Luzinda	..	Busoga.	S. M. N. Kijambu	..	..	Seconded.
P. S. Bulera	..	Kampala.	J. C. Ssozi	..	..	Toro.
J. N. Kimoiimo	..	Busoga.	H. W. Muloki	..	E. Rwakalkara	Bunyoro.
Z. N. Wanyama	..	Bukedi.	S. B. Kikule	..	J. G. Wanyoto	Bugisu.
S. K. Mukasa	..	U. K. Scholarship.	J. S. Musisi	..	I. L. Lubwa	West Nile.
J. S. Laker	..	U. K. Scholarship.	E. J. Luswata	..	S. L. Takirambude	Mityana.
J. M. Byagagaire	..	Busoga.	E. B. Galukande	..	J. A. Wandera	Bugisu.
P. F. Kunya	..	Bukedi.	N. O. Z. Sakio	..	D. E. Kawalya	Mubende.
G. S. K. Byakika	..	Bunyoro.	T. R. Odhiambo	..	J. S. Ikara	Teso.
R. K. Kachope	..	Bukalasa.	I. M. Bulikiro	..	N. O. Z. Sakio	Teso.
P. E. K. Sibyetekerwa	..	..	J. J. Oloya	..	G. W. B. Gowa	Lango.
					J. C. M. Ddungu	Bugisu.